

# Index

## MONTHLY CATALOG, JANUARY-DECEMBER 1964

NOTE.—Entries appear in this Index under subjects or titles. Bulletins, circulars, etc., having no specific subjects are entered under the issuing office only. Index citations are to entry numbers in the catalog.

### A

Entry	Entry
A.C.I.C., see Aeronautical Chart and Information Center.	Ability—Continued
A-C Trucking Co., Inc., accident.....	ability counts, program guide for women's groups for the handicapped.....
A.E.C., see Atomic Energy Commission.	human, and natural resources of Nation, conserve, hearing.....
A.F.C.R.L., see Air Force Cambridge Research Laboratories.	key to development of human resources, education and training.....
A.F.F.T.C., see Air Force Flight Test Center.	8786
A.F.O.S.R., see Air Force Office of Scientific Research.	Ablating materials:
A.I.D., see International Development Agency.	char-forming, analysis of performance.....
A.M.C., see Army Materiel Command.	graphite, rates and surface temperatures during reentry, analytical and graphical prediction.....
A.M.R.L., see Aerospace Medical Research Laboratories.	9974
A.M.S., see Agricultural Marketing Service.	molded charring ablator, effect of resin composition and fillers on performance.....
A.P.R.O., see Army Personnel Research Office.	3017
A.R.A., see Area Redevelopment Administration.	reentry, Trailblazer IIb, identified from spectrograms.....
A.R.S. series.....	14880
11-16,	teflon and polyethylene at convective heating rates from 25 to 420 Btu/ft <sup>2</sup> sec, effective heats of ablation, measurements, errata.....
1676-87, 4188-91, 5796-97, 7890-97, 9916-21, 11740, 13563-571, 15194-199, 16932-934, 19031-55, 20896-902.	14835
A.S.D., see Aeronautical Systems Division.	thermal performance and radio-frequency transmissivity.....
AAL, see Arctic Aeromedical Laboratory.	21749
AAS, see American Astronomical Society.	Ablation:
AASHO, see American Association of State Highway Officials.	blunted cylinder-flare configuration—
Aaxico Airlines, Inc., accidents.....	free flight.....
11922, 13787	18738
Abaca, stockpiling fibers, questionable need, GAO report.....	flight investigation to Mach number of 8.48.....
21339	14884
Abajo Mountains, geology of area, San Juan County, Utah.....	mass addition in stagnation region for velocity up to 50,000 ft. per second.....
18132	18795
Abarambo, see Balambo Tribe.	rate of growth or shrinkage of nonequilibrium ice sheets.....
Abbey, P. L., fluid amplifier state of the art, research, etc.....	19651
21725	Ablators, charring, oxidation effects on performance, determination.....
Abbreviations:	13256
contractions used by FAA, air traffic control, etc., handbook.....	Abraham, Sidney, relationship of excess weight in children and adults.....
4267	18417
Federal item identification guides for supply cataloging.....	Abraham Lincoln Brigade, Veterans of, see Veterans of Abraham Lincoln Brigade.
8465	Abramowitz, Milton, handbook of mathematical functions with formulas, graphs, and mathematical tables.....
Latin American press usage, glossary.....	13267
18542	Abrasives:
Abdellah, Faye G., patients and personnel speak.....	abrasive products industry, review of 1963, outlook for 1964.....
15061	Federal item identification guides for supply cataloging.....
Abele, Gunars, trafficability in snow trenches.....	12295
8512	supplements.....
Abell, Theodore L., offerings and enrollments in secondary summer school mathematics, 1962.....	3476
570	materials, minerals yearbook chapter.....
Abell, Tyler, nomination, hearing.....	20464
4592	Absentee-Shawnee Tribe of Oklahoma, see Shawnee Indians.
Abernethy, Roy F., moisture in coal.....	Absorbers, kinetic energy, employs frictional force between mating cylinders.....
13116	13188
Ability:	
ability counts, contest for students, announcement.....	11251



# INDEX 1964

Entry	
Absorption, corrections for intensity of X-rays scattered by weakly absorbing polycrystalline materials	13131
Absorption coefficients, optical, determination	9968
Absorption spectra, <i>see</i> Spectra.	
Abstracts, <i>see</i> names of departments, bureaus, etc., issuing abstracts—also subjects.	
Academy of Agricultural Sciences, Bulgaria, organization	12967
Academy of Medical Sciences, USSR: candidates for membership, list	929
18th general assembly	5354
nominations for membership	1020, 1097
Pharmacology Division of Institute of Experimental Medicine, work	9190
vacancies in institutes, announcement	18571
vestnik	12595, 21519
Academy of Sciences, Bulgaria: annual meeting	9292
Computer Center, development of general-purpose digital computer	12699
Geological Institute, services, etc.	5158
Institute of Organic Chemistry, tasks	7187
Academy of Sciences, Hungary: activities	20266
awards	7032, 16109
leadership reports—	
Biological Sciences Department	7257
Mathematics and Physics Departments	8915, 12586
Medical Department	21610
Medical Division	2859
miscellaneous information	10774
new academicians	12779
presidium, annual report, 1961-63	21405
scientific qualification and degrees, directive of president	16054
Academy of Sciences, Kazakh SSR, activities, selected articles	5198
Academy of Sciences, Latvian SSR, interview with K. K. Plaude, president	16499
Academy of Sciences, Moldavian SSR, structure and work	11017
Academy of Sciences, Poland: new members, 1962	5047
organization of scientific information activity	10441
Academy of Sciences, Rumania, achievements in 1963 and plan for 1964	9821
Academy of Sciences, Slovakia, achievements in past 10 years	10922
Academy of Sciences, Tadzhik SSR, discusses future plans	2717
Academy of Sciences, Ukrainian SSR: candidacy report	18320
candidates for membership, announcement	16105
Microbiology Institute, status and prospects for development of research	10764
organization, activities, etc.	7345, 12966
reports	20305, 21554
Academy of Sciences, USSR: activities, 1962	10972
biological investigations	16237
Botanical Institute Imeni V. L. Komarov, work of scientific seminar of section of geobotany	12993
candidates for active and corresponding members, list	18201
coordination conference with Union republics on development and study of growth stimulants, etc	21507

Entry	
Academy of Sciences, USSR—Con.	
Entomological Society activity, 1963	19960
general meetings	16095, 16483
herald, articles	4898, 20299
I. V. Grebenshchikov Institute of Silicate Chemistry, bibliography of works by scientific personnel	12994
Journal, translations	20076
new additions	18521
new departments in operation	11128
results and prospects	9193
Scientific Council for Problems of Physiology and Biochemistry of Microorganisms, studies and plans	16204
Scientific Council, investigation of earth's crust and upper mantle	11020
Scientific Information Institute, organization and activities	12648
sessions held by sections of USSR Academy of Sciences	11109
technical cybernetics, news	2592, 4962, 8847
vacancies, announcement	11093
vestnik, translations	16395
Academy of Sciences, Uzbek SSR, Institute of Geology and Geophysics Imeni Kh. M. Abdullayev	18483
Acaricides, materials evaluated, Brownsville, Tex.	9932
Acceleration:	
angular—	
exclusion as cause of visual illusions during parabolic flight maneuvers	79
repeated unidirectional, control of arousal and effects on human vestibular responses, task	13781
bibliography	1798
biomedical research studies, bibliography	13732
electromagnetic, of variable-mass plasma	21762
gravitational—	
biological effects, USSR study	18282
plasma nonesterified fatty acids in rats subjected to acceleration	16729
high sustained, effects on pilots' performance and dynamic response	14843
low-cost tape system measures	14808
low field, hydrostatic stability of liquid-vapor interface	18771
radial, effect of adrenalectomy in white rats adapted to hypoxia on resistance to, USSR study	16279
reactions to, Soviet studies	1162
ships, acquisition and analysis of data, relative to cargo loads	7729
transverse, human tracking performance	7469
Accelerators:	
high energy, electron installations shielding	14932
linear accelerators and nuclear physics, materials of scientific technical conference, Oct. 10-14, 1961	15278
linear ion accelerators, basic problem of theory, etc.	10024
Stanford, power supply, bearing	10148
zero gradient synchrotron facility, Arzonne National Laboratory, dedication (remarks)	132
<i>see also</i> Synchrotrons—Van de Graaff generator.	
Accelerometric precordial ballistocardiogram (kinetocardiogram) in hypertension	14913

# JANUARY-DECEMBER

	Entry
Accessions Index, lists, etc., see Library accessions.	
Accidents:	
accidental death and injury statistics	15040
coverage, community planning for	9711
Federal employees—	
on-the-job injuries, financial protection	11945
work injury facts, 1962	4655
hazards of health workers (remarks)	13031
human aspects of accident barrier (remarks)	14676
incidents involving AEC shipments of radioactive materials, 1962 summary	1778
international exchange of statistics on occupational accidents (remarks)	14678
logging operations, causes	1373
National Safety Council and Public Health Service's non-work related accident facts (remarks)	13041
off the job safety as elements of total safety (remarks)	14681
prevention—	
Public Health Service grants for research	1555, 7700
references to publications	7701
records program of large company (remarks)	14680
when teenagers take care of children, guide for baby sitters	17118
radiation, due to equipment damage or breakdown, organization of medical countermeasures against, East German study	18324
using records to prevent accident (remarks)	13035
water, medical aid to victims, USSR study	21652
see also Aircraft accidents—Mine accidents—Motor vehicle accidents—Railroad accidents.	
Acclimatization:	
animals, all-Union conference	2492
effect to 2° C. on host susceptibility to Klebsiella pneumoniae challenge	7981
fish and invertebrates to water bodies of USSR, results and prospects	1003
Accountants:	
career opportunities, revenue agent, Internal Revenue Service	850, 4840
employment outlook	9382
examination announcements	207
machine, 1 & C, Navy training course	8150, 15350, 21052
Accounting, see Accounts and accounting.	7641
Accounting machines:	
current industrial reports	15310
punched card machines, excessive rental payments by Federal Aviation Agency, GAO report	12489
Accounting Operations Division, Social Security Administration:	
electronic data processing	13451
recordkeeping	13453
Accounts and accounting:	
accounting series releases, SEC	3209
accounting technician and clerk, examination announcement, amendments	11935, 15349
appropriation and fund accounts, reports on year-end status	19004, 7
Army, internal review guide, pamphlet	15267
certificated air carriers, uniform system	4108

	Entry
Accounts and accounting—Continued	
code of Federal regulations	10536
cost accounting handbook for FAA facilities maintenance	649
Federal agencies—	
accounting forms, GAO guidance manual	10591
accounting systems, submissions for GAO approval, hearings	17651
improvement of financial management, progress 1948-63	4752
policy and procedures, GAO guidance manual	3553
principles and standards, GAO guidance manual	3551
standardized fiscal procedures, GAO guidance manual	2400, 12486
transportation, GAO guidance manual	3552
Federal career opportunities, accounting technician and clerk, examination announcement	1844
finance and fiscal accounting and reporting, civil works activities, engineers, regulations	17955
instant octal accounting, byproduct of forest growth studies	14323
management audit for small retailers	20791
natural gas companies, uniform system	17984
public schools, pupil accounting, handbook	21270
publications, price list	1551
REA borrowers, accounting records, audit	3122
Social Security Administration—	
electronic data processing	13451
recordkeeping	13453
telephone companies, uniform system of accounts, FCC rules and regulations	3094
Acenaphthylene polymers, see Polymers and polymerization.	
Acetic acid, excretion with urine of 17-hydroxycorticosteroids and 5-hydroxyindoleacetic acid in pilots, USSR study	8881
see also Thioacetic acid.	
Acetylcholine physiological role and search for new medicinal drugs, USSR studies	10856
Achter, M. R., vacuum effect on creep rupture properties of aluminum	5000
ACIC, see Aeronautical Chart and Information Center.	
Acid-mine-drainage, see Drainage.	
Acids, inorganic, properties of common commercial forms	18614
see also Organic acids—also names of acids.	
Aelpenseridae, see Sturgeons.	
Acme, N. Mex., appraisal of potential ground-water salvage along Pecos River	8779
Acoma Indian Reservation, availability of ground water	12514
Acoustic heating of polar night mesosphere	1456
Acoustics, see Noise—Sound.	
ACR series	18851
Acreage allotments, see Agricultural products—also names of products.	
Acreage marketing guides, 2, 5784-86	15181
Acridine dyes, determination of degree of spirilization of transport RNA by fluorescent properties of complexes, USSR study	2889
Acrolophidae, see Microlepidoptera.	
Acta geographica Sinica (Chinese periodical):	
translations	5021

# INDEX 1964

	Entry
ACTH, <i>see</i> Adrenocorticotrophic hormone.	
Actinometry:	
and atmospheric optics, USSR 5th interdepartmental conference on	7323
selected articles, USSR	14909
Actions at law:	
cooperative cases, summary	4067
court cases related to administration of range resource on lands administered by Forest Service	15935
judicial procedures in litigation with international aspects, improve—	
law	19427
reports	2078, 19562
litigant's role and public interest (address)	7593
litigation releases, Securities and Exchange Commission	3686
<i>see also</i> Civil procedure—Criminal procedure.	
Activation analysis, <i>see</i> Radioactivation analysis.	
Actors, employment outlook	7380
Actresses, employment outlook	7380
Acts of Congress, <i>see</i> Law.	
Actuarial study series	9769
Actuaries, employment outlook	9403
Actuaries, American Academy of, <i>see</i> American Academy of Actuaries.	
Actuators, use with stepping switch provides many contacts in small space	13163
Acuty:	
auditory, primary abilities in pitch and loudness	5462
binocular visual, adults, United States, 1960-62	13424
visual, color discrimination, effect of spectral bandwidth	5468
Acute conditions, incidence and associated disability, United States, July 1962-June 1963	13423
Ada, Okla., research and field laboratory for water pollution control	11573
Adair, County, Ky., soil survey report	13459
Adami, Lanford H., heats and free energies of formation of sulfides of manganese, iron, zinc and cadmium	16644
Adams, Alexander B., 1st world conference on national parks, proceedings	20665
Adams, Clyde M., Jr., solidification and separation of ice from saline water	10677
Adams, Gary D.: foreign trade regulations— Colombia	6857
Ecuador	8832
Adams, Hannah M., facts and observations about illegitimacy	19315
Adams, James J., measurements of human transfer function	16705
Adams, Mildred, diet as factor in length of life and in structure and composition of tissues of rat with aging	19080
Adams, Robert, technological trends in American industries	11299
Adams, T. W. Army area handbook for Cyprus	10210
Adams, Thomas, physiologic evaporative water loss measurement	13727
Adams, Thomas C., characteristics of sample of logging residue in eastern Oregon	12464
Adams, Walter, strategic importance of Western Europe	19453

	Entry
Adams, William E., cropping system studies on Cecil soil, Watkinsville, Ga. 1943-62	11741
Adams County, Colo., ground-water resources of South Platte River basin	12519
Adams County, Idaho, reconnaissance petrographic cross-section of Idaho batholith	8760
Adams-Morgan democratic action to save neighborhood	21257
Adaptation (biology): animal organs, USSR studies	21415
Adaptive dynamic response characteristics of human operator in simple manual control	11395
Adaptive-predictive modeling of nonlinear processes	20521
Adaptive programming techniques for circuit design	20972
Addison, Ill., population, special census	4350
Addiss, Lulse K., job-related expenses of working mothers	6053
Additives:	
confectionery, amend food, drug and cosmetic act— hearing	12147
reports	13981, 15547
electrophilic, effect on radiolytic products of organic chain reactions	10033
food, analysis, determination of residual hydrocyanic acid	763
food, transitional provisions amendment of 1964— law	19433
reports	17548, 17610, 19570
polar-nonpolar, effect on oil-spreading on solids, applicable to nonspreading oils	5603
Addresses, lectures, etc.: aerospace medicine lectures	16999
by—	
Anderson, Robert J.	7692
Baker, John A.—1718-19, 5803-6, 16942	
Balderson, C. Canby	6688, 17989, 19705
Ball, George W.	20985
Barrett, Ashton C.	12390
Bartley, Robert T.	2312
Batt, William L., Jr.	5926, 5931-33, 8014, 11819
Belen, Frederick C.	9696
Black, James B.	13031
Bortz, Nelson M.	16576
Boyd, Alan S.	4364, 6063
Braderman, Eugene M.	861, 11968, 11971, 15372, 19346
Brelmyer, Harold F.	15188
Brenner, Edward J.	16805, 18874, 20715
Bridwell, Lowell K.	19358-359
Brimmer, Andrew F.	226, 228, 8184, 10128, 19354, 21064
Brody, Leon	14676
Brown, Gerald A.	14960
Bullitt, John C.	1642
Carter, Genevieve W.	11711
Cass, Millard	7356, 13028, 20426
Champion, K. S. W.	16998
Chapin, Arthur A.	16575, 21653
Clague, Ewan	2973, 7373, 11267, 14708
Clapp, Norman M.	11597, 13434
Cleveland, Harlan	7769, 20821
Cliff, Edward P.	10588
Coffin, Frank M.	4869
Collins, J. F.	11880
Collins, Leroy	15376-377, 17166, 19367, 21100
Conklin, Maxwell R.	11912
Courter, Joseph A.	13036

# JANUARY-DECEMBER

Addresses, lectures, etc.—Continued	Entry
by—continued	
Crafts, Edward C.	1534,
5629, 7666, 7668, 9690, 18870-871	
Daane, J. Dewey	19704, 19707
Dean, Arthur H.	17165
DeButts, Henry M.	15333
DeGroot, Paul	1283
Dillon, Douglas	1638-41,
3177, 7822-24, 9859, 13503-504,	
16901, 19008-9, 20862, 21913-	
914.	
Donat, George	10043,
13741, 19274-276, 19278	
Driscoll, Edward J.	19317
Dunham, Charles L.	19257
Dworsky, Leonard B.	5648
Dzhurov, Dobri	5026
Eaton, Fred	8015, 21065
Eaton, William W.	10129, 13831
Edelman, Sidney	15971
Ellison, Ralph	20455
Evans, W. Duane	13076
Faught, C. K., jr.	15374
Faulkner, Rafford L.	19262
Feldesman, William	9648
Flelds, W. E.	13041
Ford, Frederick W.	2309
Fowler, Henry H.	1643,
6623, 14233, 21294	
Freeman, Orville L.	23,
1689-91, 1712-16, 5807-10, 5812,	
5824, 5866, 7907, 7917, 7942-45,	
11748-750, 11781, 13575-576,	
16943, 16949, 20907.	
Fumich, George, jr.	1396
Gardner, Richard N.	1599
Giles, Robert E.	7425
Gilmore, Voit	5739-40
Godfrey, Horace D.	7905
Goldstein, Harold	1388, 13087
Goodwin, Robert C.	6585
Goshen, Edw. E.	87
Gottlieb, Sylvia B.	2974
Greenberg, Leon	1387,
5425, 11298, 14713, 18644	
Gronouski, John A.	5632-33,
7674-75, 9694-95, 11534, 13373-	
374, 13376, 15020-24, 15028,	
16807-813, 18876-879, 20718-	
723, 21835.	
Guevara, Che	1280
Harlee, John	4701,
6638-39, 8551, 10522, 19687,	
21298, 21300-301.	
Hearn, George H.	21299, 21302
Henning, John F.	7363
Henry, E. William	2308,
10514, 15887, 21295	
Hewell, Grace L.	8784, 12533
Hill, Robert L.	15375
Hodges, Luther H.	224-225,
227, 229, 1853-54, 1856, 4410,	
6115-20, 8180-83, 10124-125,	
11963-966, 11973, 13817-819,	
15366-367, 17156, 19347-352,	
19355, 19363.	
Hollomon, J. Herbert	8190
Holton, Richard H.	8189,
10133, 11967, 13820, 13823,	
13825, 19365.	
Holum, Kenneth	840, 844
Hopkins, Ralph L.	18701
Hughes, Thomas L.	15260, 17031
Hutchison, S. Blair	12435
Hyde, Rosel H.	2310, 15888
Johnson, Lyndon B.	1544
Johnson, Nicholas	13097,
14723-724, 18655, 20457-458,	
20460.	
Jones, Peter T.	21094

Addresses, lectures, etc.—Continued	Entry
by—continued	
Kennedy, John F.—	21216
compilation, 1947-60	-----
Keppel, Francis	6574
Keyserling, Mary D.	15172, 15177
Kleebe, Howard W.	5561, 7594
Klotz, Herbert W.	19356-357,
19360, 21095	
Lacroix, Henri P.	14678
Lamale, Helen H.	5429
Leedom, Boyd	1508
Lesser, Arthur J.	197
Levine, Louis	15862
Linsenmayer, L. R.	5452
Loevlinger, Lee	2311
Lyon, A. W.	10130
MacArthur, Douglas	8020
compilation	19526
McBrien, Thomas H.	14682
McCormack, John W.	2132
McCulloch, Frank W.	11455,
13291, 13293, 16754	
MacCutcheon, Edward M.	18654,
20459	
McDermott, Edward A.	12329
McFadden, E. C.	13035
MacGowan, C. F.	21369
MacKenzie, Vernon G.	5656
McMurray, Joseph P.	2318,
4689, 6631, 8543, 8547, 10519-	
520, 14239, 19682, 19684.	
Macy, John W., jr.	11996
Mansfield, Mike	2132
Martin, Clarence D., jr.	8185, 10131,
11972, 13826, 15368	
Martin, Edwin M.	1598
Martin, Wm. McC., jr.	2326, 4720
Matloff, Maurice	9960
Mehren, George L.	1698,
5802, 5821-23, 5860, 5865, 7908,	
7913, 7915-16, 7924, 11747,	
11775, 20923A.	
Members of Congress, memorial	
addresses and tributes in	
eulogy of the late President	
John F. Kennedy	15606
print as Senate document, re-	
port	4476, 4535
Menninger, William C.	10086
Merrick, Samuel V.	1363
Meyers, Joseph H.	1661
Mitchell, George W.	4718,
6687, 15905, 19706	
Morgan, Roy L.	223,
4409, 4413, 8178-79, 11969,	
15365, 17159-160, 19353, 19360-	
362, 21096-98.	
Morton, James G.	4412,
6124, 10126, 13821, 21093	
Moynihan, Daniel P.	18607
Murphy, Charles S.	1692,
1717, 5811, 5820, 5827, 5855,	
17122	
Murphy, Robert T.	2972
Myers, Robert J.	10670
Nash, Philleo	14680
Nuernberger, George F.	7591,
Ordman, Arnold	7593, 11456, 13290
Otis, Jack	5762
Palfrey, John G.	134, 1785
Parcher, Frank M.	14219
Paul, Norman S.	20984
Peterson, Esther	16817, 20732
Pollock, Eugene N.	14679
President Johnson	283,
1996, 9792, 9798, 11620, 12562,	
12565, 17032.	
President Kennedy	10540
inaugural, Jan. 20, 1961	
(poster)	13920
President Truman	14254
Ramey, James T.	135, 10039, 10264
Renne, Roland R.	1724, 7914
Robertson, J. L.	684, 8586, 12405

Do not order from index; see indicated entry

# INDEX 1964

Entry	
Addresses, lectures, etc.—Continued	
by—continued	
Rosca, Robert V.-----	3175, 13502, 20860-861
Roosevelt, Franklin D. Jr.-----	1857, 4414, 8187-88, 10132, 11974-977, 13827-830, 17161-163.
Rostow, W. W.-----	7761, 15259
Roterus, Victor-----	8013, 8015
Rusk, Dean-----	5698, 7772, 9805-6, 13465-466
Russell, Harold-----	14084, 18619
Sands, Edward S.-----	20769
Sawyer, William A.-----	14672
Schmeltzer, Edward-----	661, 21372
Scotti, Marie-----	14681
Seaborg, Glenn T.-----	132, 138, 1783-84, 4308-9, 4311, 5993, 8093, 8096, 10040, 11871-872, 17067, 19258, 19261, 19265-267, 21020.
Shapiro, Karl-----	20455
Siegel, Gordon S.-----	13034
Sinev, N. M.-----	20026
Slayton, William L.-----	9864
Surrey, Stanley S.-----	20863
Switzer, Mary E.-----	7833
Tape, Gerald F.-----	11870, 17066
Taylor, Hobart, Jr.-----	1543, 3089, 5637, 13377, 13380, 15034-35, 16820.
Terry, Luther L.-----	8097, 7688
Truman, Harry S., and Senators' responses, on his 80th birthday-----	15611
print as Senate document, report-----	15685
Udall, Stewart L.-----	841, 843, 10812
Ulbricht, Walter-----	2702
Underhill, A. Henton-----	21829
Untermeyer, Louis-----	9485
Warren, Earl-----	2132
Weaver, George L-P-----	7352, 11244, 11250, 13025, 19828
Weaver, Robert C.-----	830
Westrup, Jack-----	11305
White, Robert M.-----	13531
Whitton, Rex M.-----	9739
Williams, D. A.-----	3137
Williams, Harold W.-----	11829
Winston, Ellen-----	1659, 6832, 8747, 9889, 11712, 11718, 13594-535, 13537, 19028-29.
Wirts, W. Willard-----	1357-61, 2039-40, 7383, 7387, 7362, 11245, 13029-30, 14661-662, 14665-666, 18608, 20425.
Wolflein, Seymour L.-----	14677, 20428
Woolner, Sidney H.-----	230
Wyman, Thomas G.-----	17157
Federal Fire Council's speakers directory for fire safety training programs-----	6793
FMC SP series-----	661, 47011, 6638-39, 8551, 12390, 19687, 21298-302.
Harmon memorial lectures in military history (series)-----	9966
Hungarian lectures on current problems in cell regulation-----	20087
Improving English skills of culturally different youth, excerpts of conference speeches-----	2274
Inaugural address of John F. Kennedy (poster)-----	13920
print as House document in form suitable for framing, reports-----	4475, 8421
Jessie M. Bierman annual lecture in maternal and child care (series)-----	197
MA SP series-----	2977, 7425, 13097, 14723-724, 18654-655, 21682.

Entry	
Addresses, lectures, etc.—Continued	
National Institute of Dental Health, 15th anniversary observance-----	5556
Potato Utilization Conference, abstract of papers-----	7940
public papers of Presidents of United States, announcement and order form-----	15037
2d plenum of Central Committee of Indonesian Communist Party, works for oral delivery, copy-righted-----	8913
Jan.-June 1963-----	6528
July-Dec. 1963-----	15825
Aden: economy, basic data-----	18169
labor conditions-----	5446
Aden, Gulf of, sailing directions, change-----	11477
Adhesion, bonding between atomically clean surfaces-----	7547
Adhesive tape, gummed and pressure-sensitive, testing methods, Federal standard-----	15907
Adhesives: epoxy bond, stringent cleaning technique recommended-----	14830
Federal item identification guides for supply cataloging-----	12294
supplements-----	3475
military standardization handbook, use in design of bonded joints, determination of mechanical properties-----	10447
Adirondack Mountains, ore deposits of St. Lawrence County, N.Y., magnetite district-----	2374
Adjustment Board, National Railroad, see National Railroad Adjustment Board.	15947
Adjutant General's Office: Army Library-----	
selected current acquisitions-----	4023
selected periodical literature-----	4027
Adler, Harry F., dysbarism-----	13646
Adler, Louis, relief-----	6266
Administered prices, see Inflation (finance).	
Administrative Conference of United States: create-----	
hearing-----	15594
law-----	17358
reports-----	15489, 15565
Administrative management: academic administration in liberal arts college, case studies-----	4616
airports, bibliography-----	6609
Army Materiel Command management improvement program, Plowback, improvements reported-----	1759, 11838
centralized and decentralized management, bibliography-----	6613
civilian personnel, concepts and principles, Navy applications-----	20693
Communist China, translations-----	18599
defense traffic management handbook-----	6540
electronic data processing, functional approach-----	681
elementary principles in management, Soil Conservation Service correspondence study course-----	16864
farmer cooperatives-----	646
functions of forms management office, AFM manual-----	11788
GSA intern program-----	14336
indispensable weapon, personnel planning-----	59
International Development Agency, personnel administration and operations, hearings-----	4569



# JANUARY-DECEMBER

	Entry		Entry
Administrative management—Con.		Adrenal cortex function with experi-	
Labor Dept. management intern		mental extracorporeal circula-	
program	7355	tion, USSR	12759
management course		Adrenal glands:	
topic	16855	cell proliferation in control and	
management research summaries,	20782	cold exposed rats	4247
list, supp.	3128	USSR studies	14620
manpower management plans, etc.,		Adrenalectomy, white rats adapted to	
improvements, 1963	10337	hypoxia, effect on resistance to	
national parks, wildlife manage-		radial acceleration, USSR	
ment	12541	study	16279
Navy management review	3780	Adrenocorticotrophic hormone:	
personnel administration and man-		intramuscular test based on parotid	
agement in AID, report	4520	fluid free 17-hydroxycortico-	
print as Senate document, report	4538	steroid levels	17013
personnel, code of Federal regula-		parotid fluid corticosteroid levels at	
tions	12398	1 and 2 hours after graded	
personnel information bulletin of		doses	19183
VA	3846	Adsorption:	
personnel literature	3847	electrostatic, of ions, USSR study	14456
personnel management, bibliog-		mathematics of dispersion with	
raphy	11607	linear adsorption isotherm	19785
personnel methods series	17139	oleate on fluorite and barite, effect	
personnel opportunities in dynamic		of fluoride, sulfate, and chlo-	
changing society (address)	20429	ride ions, infrared study	11319
PERT, program evaluation and re-		see also Heat of adsorption.	
view technique, bibliography	6610	Adult education, see Education—Voca-	
positions in Federal departments,		tional education.	
etc., examination announce-		Adults:	
ment	11952	binocular visual acuity, United	
public management sources	3947	States, 1960-62	13424
public welfare, group services,		disabled in childhood, social se-	
guides	19666	curity benefits	1588, 16861
records and credit in profitable		heart disease, United States,	
management, course program	20782	1960-62	18926
scientific personnel, 1st symposium		overweight, reflection of excess	
of Federal Council for Science		weight in childhood	13417
and Technology, proceedings	8540	Advanced bearing technology	7477
small business—		Advanced radar traffic control system,	
management aid for small manu-		see Air traffic.	
facturers, annual compilation	18941	Advanced waste treatment research	
management series	5683-84,	program of Public Health Ser-	
13446-447, 16858, 20790-791		vice	13391
starting and managing series	3127,	Advertising:	
	7731	advertising and our national pur-	
staff development—		pose (remarks)	10126
integral part of administration,		allowances given to retailers by	
Spanish edition	8525	manufacturers and whole-	
State public assistance plans un-		salers, nature and purpose	
der social security act	12355	hearing	4457, 19607
Administrative Office of United States		broadcasts, prohibit F.C.C. from	
Courts, report 1963	9904	making rules rel. length, etc.	
Administrative personnel, see Admin-		hearings	2114
istrative management.		reports	2080, 4483
Administrative procedure:		deceptive advertising of previously	
act, amend—		used lubricating oil, FTC trade	
hearings	6517	regulation rule	15911
report	15679	deceptive pricing, guides against	4726
Federal Communications Commis-		joint ads, FTC advisory opinion,	
sion, legal problems (address)	21294	hearings	8457, 19607
Government offices, investigation—		misbranding and false labeling of	
authorization, report	4556	decorative or simulated hard-	
expenses, report	17807	wood products, hearings	6364, 6500
report	6479	newspaper, affects retail sales of	
Administrators, see Hospital adminis-		broilers and meat	14171
trators.		self-regulation, report on operations	
Admiralty:		of private enterprise	11978
claims settlement, amend law, re-		workers, employment outlook	9383
port	15511	Advisory Commission on Information:	
unification of civil and admiralty		report, 1963—	
procedure, amendments	9903	departmental edition	4176
Adney, Edwin T., bark canoes and		document edition	4435
skin boats of North America	20653	Advisory Commission on Intergovern-	
Adolescents, see Youth.		mental Relations:	
Adolph, Charles E., B-52H perform-		annual report, 1964	5782
ance and stability tests	1729	appropriations, 1965—	
Adoption:		hearings	6341, 12251
adoptions in United States	10078	law	17251
children, make certain practices un-		reports	8297, 14048
lawful, report	19572	commission report (series)	7876,
interprofessional team work to safe-			14189, 20894
guard adoptions	13778	general information	16929
ADP, see Electronic data processing		releases	3865
systems.		State legislative program	9905



# INDEX 1964

	Entry
Advisory Commission on International Educational and Cultural Affairs, report, 2d annual.....	19451
Advisory Committee of Users of Educational Statistics, report.....	6578
Advisory Committee on International Organizations, report on financial management and United Nations system.....	11618
Advisory Committee on International Rules of Judicial Procedure: establishment, amend act—law reports.....	17381 2077, 17730
Advisory Committee on Older Americans: establish—hearings report.....	895 12096
Advisory Committee on Voluntary Foreign Aid: register of agencies reports of registered agencies.....	10710 10711, 15990, 21375
Advisory Council of the President's Committee on Employment of the Handicapped, special report to the President.....	20431
Advisory Council on International Monetary and Financial Problems, see National Advisory Council on International Monetary and Financial Problems.	
Advisory Group on Future of St. Elizabeths Hospital, final report.....	12531
Advisory groups, July 1, 1964, Vocational Rehabilitation Administration, director.....	16008
Advisory Panel of Users of Educational Statistics, report.....	8494
Advisory Panel on Federal Salary Systems, report.....	2119
AE-CL (series).....	3316
AEDC, see Arnold Engineering Development Center.	
AEC, see Atomic Energy Commission.	
Aerial mapping: radar land mass simulation, digital techniques.....	1528
final report.....	11489
Aerial penetrometers, see Penetrometers.	
Aerial photography: double resection in space, USSR study.....	16458
equipment, installation and maintenance.....	13624
horizons, USSR study.....	1286
panchromatic and color aerial photographs, identification of tree species.....	15207
scanning stereo photographic information.....	7646
Soviet, aerial surveying and geology.....	5387
television cloud photography, meteorological satellite data, catalogue.....	
TIROS V.....	9882
TIROS VI.....	19026
two plot transfer devices developed for forest insect trend surveys.....	14328
world atlas from TIROS satellites I to IV.....	20525
Aerial survey of spruce and fir volume killed by spruce budworm in northern Minnesota.....	12472
Aerial surveys, see Aerial photography.	
Aerobee rockets, see Rockets.	
Aerodynamic heating: conical entry vehicles at speeds in excess of earth parabolic speed.....	5526

	Entry
Aerodynamic heating—Continued	
convective and radiative heating of shapes entering atmospheres of Venus and Mars.....	3026
heat transfer and pressures on swept cylinder in vicinity of its intersection with wedge and flat plate.....	16678
heat transfer measurements on flat plate and attached fins at Mach nos. of 4.51 and 4.44.....	14873
mass-transfer cooling on blunt cone.....	9588
measuring total rates to bodies of arbitrary shape, experimental technique.....	18773
meteor, results from analysis of flight data.....	16680
thermal-shielding performance of phenolic nylon, effect of weight, density, and heat load.....	13225
Aerodynamics:	
air loads on man, studies.....	13726
blunt bodies, shock-layer radiation at reentry velocities.....	9620
boat-tailed bodies having turbulent boundary layers, afterbody pressures at Mach 5.98.....	14882
braking of blunt nonlifting vehicles entering earth's atmosphere at very high speeds.....	11392
contamination induced luminosity ahead of blunt body in Langley hotshot tunnel, study.....	18775
effectiveness of 3 exit vane cascade ducted fan configurations for vectoring thrust.....	20575
longitudinal characteristics of blunted cones at Mach nos. of 3.5, 4.2, and 6.0.....	7546
mechanisms for burnishing surfaces, synthesis, USSR study.....	9326
prediction of penalties caused by ice formations on various airfoils.....	7534
Saturn 1, Block 1 space flight vehicles, analysis.....	7498
supersonic characteristics of bodies having variations in fineness ratio and cross-section ellipticity.....	18741 15008
supersonic, handbook.....	
transonic, characteristics of canard airplane configurations, effects of configuration geometry.....	20595
see also Aircraft—Airplanes—Boundary layer—Drag (aerodynamic)—Flow—Flutter (aircraft)—Heat transfer—Helicopters—Shock (mechanical)—Spacecraft—Stability of aircraft—Wings (aircraft).	
Aeroelasticity, characteristics of articulated and rigid, hingeless, helicopter rotor systems, parametric investigation.....	21907
Aeroembolism, cardiorespiratory responses to compression therapy following decompression sickness.....	5904
Aerolonization:	
effects of aerolons of different polarities, USSR studies.....	1031
influence of low concentrations of light aerolons on cardiac activity of rabbits.....	5373
Aerojet-General Corporation, electronic data processing system, excessive costs to Government in sale and lease-back, Defense Dept., GAO report.....	21335
Aerology:	
Central Aerological Observatory, proceedings.....	16726

	Entry
Aerology—Continued	
variability of refraction coefficient of atmosphere for ultrashort radio waves, USSR research—	2566
Aeromagnetic maps, surveys, etc., <i>see</i> Maps and charts.	
Aeromedical Research Institute, <i>see</i> Civil Aeromedical Research Institute.	
Aeromedical reviews—	4258,
7997-98, 11805,	13646
Aeronautical and Space Sciences Committee, Senate:	
calendar—	3661
hearings—	4568, 8433, 10408
investigations and studies, aeronautics and space activities, authorization, report—	4552
report—	12217
staff report—	420
Aeronautical Chart and Information Center:	
bulletin—	3215
bulletin digest—	4222, 15225
Aeronautical charts, <i>see</i> Maps and charts.	
Aeronautical Electronic and Electrical Laboratory, report—	7659
Aeronautical engineering:	
aviation engineering, USSR translations—	4982, 5017, 8862
Means, James, and problem of man-flight, 1882-1920—	18944
Aeronautical instruments, procurement of spare parts under contracts for related equipment by Air Force Dept., GAO report—	4766
Aeronautical supplies:	
aircraft specifications—	3242
procurement of spare parts under contracts for related equipment by Air Force Dept., GAO report—	4766
<i>see also</i> Military supplies.	
Aeronautical Systems Division:	
technical documentary reports—	46-50, 4223-26, 5867-69, 7955-59, 11783.
technical reports—	4227, 5870
Aeronautics:	
activities of Federal depts., etc., investigate, authorization, report—	4552
Aeronautical Chart & Information Center—	
bulletin—	3215
bulletin digest—	4222, 15225
aeronautics and space, NASA installations focus for achievement—	7475
air transport services, agreement with Mexico—	20842
airman's guide—	
Pacific supplement—	3245
United States—	3244
supplement—	3424
arbitration, air transport agreement with Italy—	20823
Army aviation digest—	4111
aviation—	
air traffic control, agreement with Canada—	5706
industry, ceramics for aviation parts—	8980
key to weather forecasts—	11689
military aircraft flights, agreement with India—	1613
news (periodical)—	3452
radio services, FCC rules and regulations—	3991, 8534
transport services, agreement with—	
Bolivia—	7792
Mexico—	7798
New Zealand—	18969

	Entry
Aeronautics—Continued	
chart updating manual—	3314
civil aeronautics manuals—	647,
3321-26, 6616, 8528-29	
status—	6622, 12385, 21293
civil air regulations—	648, 4675, 19667
amendments—	2304,
4676-78, 10504-506, 12359-378, 14222-225, 15880-882.	
special regulations—	4045
civil aviation—	
employment outlook—	9442
employment requirements and changing occupational structure—	16591
manpower requirements of industry, Project Long Look—	21292
Panamanian national regulations—	18422
Coast Guard aviation story—	6114
code of Federal regulations—	6651-52, 8556-57
FAA statistical handbook of aviation—	10508
Federal aviation act of 1958, amend—	
hearings—	6502-3
reports—	454, 6288, 10413, 12225
Federal aviation regulations—	650,
2305-7, 4681-83, 6617-21, 8531-33, 10510-512, 12384, 14227-239, 15883-885, 17964-968, 19670-675, 21287-291	
status—	6622, 12385, 21293
international notams—	3608
international weather schedules, service O, ATS handbook—	11812
change—	19191
memorandum for aviators—	3717
NASA operations, semiannual report—	
departmental edition—	1481
document edition—	284
naval aviation—	
news—	3772
NROTC aviation cruise manual—	13318
safety review—	3260
notice to aviators—	3799
private pilot's handbook of knowledge—	6732
research, investigation, expenses report—	12071
Soviet aviation design, new achievements, USSR study—	12688
space flight of Soviet cosmonauts—	19951
United States activities, report 1963—	
departmental edition—	5537
document edition—	4434
<i>see also</i> Flight—also certain headings beginning Air.	
Aeronautics and Space Administration, National, <i>see</i> National Aeronautics and Space Administration.	
Aerosol generators, air operated, portable, studies—	7051
Aerosols:	
AEC handbook—	8068
attenuating components in ultraviolet region, altitude variation—	19149
effectiveness of bacteria collectors in determining bacterial concentration, USSR study—	7059
industrial rhenum, hygienic characteristics, USSR study—	18372
penetration through filter paper with and without pinholes—	4297
pulsating unit AAP-0.5 Mikron, USSR study—	1038
tularemia dust vaccine testing, USSR study—	9195
Aerospace, <i>see</i> Outer space.	
Aerospace maintenance safety—	3216

# INDEX 1964

	Entry
<b>Aerospace Medical Research Laboratories:</b>	
Biodynamics and Bionics Division, bibliography of research reports and publications.....	11797
technical documentary reports.....	51
	9967, 11784-785
<b>Aerospace medicine, see Medicine.</b>	
<b>Aerospace Research Office:</b>	
cumulative index of research results.....	11801, 15230
OAR series.....	67
7992, 11801, 15230-231, 17001, 19160	
quarterly index of current research results.....	15231, 20969
research accomplishments of Air Force.....	17001
research efforts, project sequence, list.....	7990
research résumés, 1963.....	7992
<b>Aerospace safety (periodical).....</b>	<b>3217</b>
<b>Aerospace science, see Science.</b>	
<b>Aerospace vehicle, see Spacecraft.</b>	
<b>Aeroxine, toxicity, effects of arginine, l-glutamate, and pyridoxine.....</b>	<b>19182</b>
<b>AET, radioprotection with AET-cystine in rhesus monkey.....</b>	<b>19179</b>
<b>AETH, see Aminothethylsoulouronium.</b>	
<b>AFCRL, see Air Force Cambridge Research Laboratories.</b>	
<b>AFDC, see Children—Families—Public assistance.</b>	
<b>AFMTC, see Air Force Flight Test Center.</b>	
<b>Afghanistan:</b>	
technical cooperation agreement.....	9800
U.S.S.R. boundary, study.....	7764
<b>AFL-CIO, see American Federation of Labor-Congress of Industrial Organizations.</b>	
<b>AFOSR, see Air Force Office of Scientific Research.</b>	
<b>Africa:</b>	
African series.....	1594, 16868
agricultural situation, 1964.....	6557
contributions to hydrology of Africa and Mediterranean region (series).....	6823-24
foreign relations of U.S. 1943—	
departmental edition.....	11610
document edition.....	10153
journey through 5 wars, translations.....	12768
music, annotated bibliography.....	14715
north—	
Educational Materials Laboratory report.....	14183
leadership, 2d and 3d generation elites in the Maghreb.....	9804
time of decisions.....	19199
research studies completed, list.....	7756
research studies in progress, list.....	9792
social, economic, and political ties with U.S. (remarks).....	19828
social science research studies in progress, list.....	20816
Socialism, Nasser, Ben Bella and the fine distinction.....	2729
south of Sahara, bibliography.....	11303
southeast coast, sailing directions, change.....	1522
southwest coast, sailing directions, change.....	16777
Soviet handbook, description of.....	9126
tobacco industry.....	764
translations.....	893
1050, 1101, 2724, 2933, 5079, 5115, 5251, 5366, 7048, 7083, 7187, 7332, 8857, 9059, 9143, 9302, 10791, 10838, 10934, 11087, 11115, 11215, 11236, 12703, 12709, 12752, 12787, 12880, 12932, 12977, 13007, 14475, 14487, 14552, 14561, 14880, 14597, 16015, 16047, 16062,	

	Entry
<b>Africa—Continued</b>	
translations—Continued	
16093, 16107, 16144, 16158, 16164, 16288, 16307, 16342, 16371, 16373, 16453, 16477, 16496, 16515, 16548, 18243, 18252, 18270, 18330, 18430, 18444, 18478, 18503, 18551, 18567, 18573, 18602, 18846, 18873, 19913, 19918, 19923, 19975, 20011, 20019, 20062, 20082, 20095, 20104, 20117, 20153, 20202, 20212, 20239, 20304, 20315, 20355, 20364, 21382, 21391, 21422, 21500, 21505, 21532, 21583, 21604, 21634, 21644.	
United States and Africa.....	16868
United States foreign aid program, report of study, print additional copies, reports.....	15682, 17512
west coast—	
lights and fog signals, list.....	5578, 21814
tide tables.....	13813
west, ophiodoid fish genus, <i>Oligopus</i> , review.....	20656
Zanzibar, question mark.....	5935
<b>Africans in Moscow, disillusionments.....</b>	<b>6881</b>
<b>Afterbodies:</b>	
cylindrical, with different nose shapes and nose drag coefficients in helium, Reynolds number effects on induced pressures.....	1486
geometry and sting diameter effect on aerodynamic characteristics of slender bodies at Mach numbers from 1.57 to 2.86.....	1465
pressures on 2-dimensional boat-tailed bodies having turbulent boundary layers at Mach 5.98.....	14882
<b>After images, visual, as source of information.....</b>	<b>16797</b>
<b>Agate Fossil Beds National Monument:</b>	
establish—	
bearing.....	15808
report.....	15748
<b>Age:</b>	
age-adjusted and age-specific death rates for malignant neoplasms, 1960.....	15041
discrimination in employment by Federal contractors and sub-contractors, Executive order against.....	14669
functional state of certain analyzers as function of sex and age, USSR study.....	20413
relationship to altitude adaptation and work performance.....	13735
<b>Age-hardening characteristics of nickel-base heat-resisting alloys, Japan.....</b>	<b>12961</b>
<b>Age (law):</b>	
State laws governing age of majority.....	9894
<b>Aged:</b>	
America's centenarians, social security beneficiaries who have lived to 100.....	18946
automobile ownership by aged persons in U.S., 1962.....	20799
bills affecting older persons, introduced 88th Congress—	
1st session.....	5761, 15168
2d session.....	11715
Blue Cross and other private health insurance for the elderly—	
committee print.....	17860
hearings.....	14121, 15787
companion to elderly person, suggested training program.....	15840
cooperative extension service work.....	2316

# JANUARY-DECEMBER

	Entry
<b>Aged—Continued</b>	
creating opportunities for older persons, selected papers from 4th annual conference of State Executives on Aging	21923
employment opportunities, increasing for the elderly—	
hearings	8435, 10409
recommendations and comment, report	21236
farm population, older, 1960-63	16922
Federal assistance—	
community health services for chronically ill and aged, PHS project grants program	15166
community health services, pilot project contracts and cooperative agreements	9884
mental health project grants program of NIMH	15167
research and demonstration grant program—	
Education Office	7849
Vocational Rehabilitation Administration	7850
Welfare and Social Security Administrations	7848
foster homes for older people	20881
health frauds and medical quackery affecting the elderly, hearings	14122, 15788, 17862
housing for elderly—	
direct loan program, hearings	2232
FHA, projects and people	15893
financing non-profit (paper)	230
nonwhite, and his housing	4827
problems, hearings	8434, 12246, 14123
public projects, services (address)	11718
report of recommendations made to National Capital Housing Authority for apartment units	7894
rural areas, insured loan program, extend—	
law	13889
reports	12091, 14058
senior citizens loan program, information	8191
senior citizens loans for rental housing in rural areas	10503, 20932
senior citizens, special text	194
income of older persons, 1959, selected data	7854
income of older people, 1962, supplement	3191
income, State variations, 1959	3133
interstate mail order land sales, hearings	19586, 21237
legislative and executive actions affecting senior citizens, 1963-64	21238
long-term institutional care, hearing	12247
longevity and physiological old age, USSR study	10891
medical assistance, State public assistance plans under social security act, staff development provisions	12355
medical care—	
District of Columbia, amend public assistance act, report	17752
social security amendments of 1964, hearings	17876
social security program, hearings	6371
meeting needs of older persons where they live, State's role in community planning, conference papers	9887
numbers, marital status, etc., statistics	10072
nursing homes and related long-term care services, hearings	12248, 15789

	Entry
<b>Aged—Continued</b>	
OASDI benefits, estimated distribution by income class	15086
older American veteran	15143
on growing older	21836
opportunities for older Americans, Senior Citizens Month, May 1964, guide	15169
programs to help older persons, assistance to States, etc.—	
hearings	395
report	12096
protective services for elderly people	13379
protective services for older persons	6602
rehabilitating the aging disabled worker, programs	3185
rural county cares for its aging, story of Alkin County, Minn.	11717
senior citizens and how they live, analysis of 1960 census data	4827
senior citizens center, goals, functions, and programs	9704
services for senior citizens—	
hearings	12240
report	17850
see also Aging	
Agency for International Development, see International Development Agency	
Agenda item, peace	15261
Agents, rules governing practice before Internal Revenue Service	19002
see also Foreign agents	
<b>Aggregates:</b>	
clay and shale lightweight, expanded, industry in south-central U.S.	20478
compaction of graded crushed-aggregate base course	641
lightweight—	
expansion properties of clays, shales, and argillites of Minnesota	1434
expansion properties of Iowa shales, clays, and loess	9510
production from washery refuse	13125
manufacturing by nuclear methods, feasibility	17959
Aggregation affects color of elm spanworm larvae	2383
<b>Aging:</b>	
aging in modern world, bibliography	9883
aging (periodical)	3218
bibliography	11661, 13491
bills on aging, etc., introduced 88th Congress	5761, 11715, 15168
chronological and physiological aging as related to physical work capacity	5995
diet as factor in length of life and in structure and composition of tissues of rat with aging	19080
Earlham, Iowa, organizes basic services for its aging	15171
facts on aging series	3191, 16922
Federal assistance for projects	7848-50, 9884, 15160-167
Panel of Consultants on Aging, recommendations and proceedings	7853
patterns for progress in, case study (series)	9888, 11717
positive view asks much of education	12325
President's Council on Aging, report	5640
process, biological aspects, USSR study	12818
see also Aged	



# INDEX 1964

	Entry
Aging Administration:	
establish—	
hearings—	895
report—	12096
Aging of farm-cured hams as affected by method of cutting, curing, and smoking—	7954
Aging, Special Committee on, Senate:	
committee prints—	17860, 21236, 21238
continuing authority, etc., report—	6461
hearings—	8434-35, 10409, 12246-249, 14121-123, 15787-789, 17861-862, 19586-587, 21237.
report—	17856
Agreement on tariffs and trade, <i>see</i> General agreement on tariffs and trade.	
Agressor forces, nuclear play calculator, field manual—	10001
Agricultural adjustment act, <i>see</i> Agriculture.	
Agricultural aspects of Economic act of 1964—	12116
Agricultural chemicals, <i>see</i> Chemicals.	
Agricultural chemistry:	
chemistry in agriculture, USSR publication—	16206
economic effectiveness of introduction of processes, USSR study—	10819
fertilizers and agrochemistry research, USSR studies—	16089
Rumanian agrochemical research—	9235
Southern Utilization Research and Development Division, publications and patents, semiannual list—	5800, 19061
USSR, need for agrochemistry—	18259
Agricultural colleges, <i>see</i> Land-grant colleges.	
Agricultural commodities, <i>see</i> Agricultural products.	
Agricultural conservation program:	
information about conservation—	5854
sportsman's stake—	5847
summary by States—	5801, 19062
statistical summary—	7903, 20906
Agricultural credit:	
code of Federal regulations—	12399
farm credit act, amend—	
hearing—	15579
law—	17387
reports—	10239, 17771
Farmers Home Administration, loans, general information—	5842
<i>see also</i> Loans—Production credit associations.	
Agricultural economies, <i>see</i> Agriculture.	
Agricultural experiment stations:	
Hatch experiment station act, administrative manual—	10902
workers in agricultural subjects—	7909, 20909
Agriculture finance, <i>see</i> Agriculture.	
Agricultural insurance:	
corn crop, general information—	653
cotton crop, general information—	4088
crop insurance coverage, expand—	
law—	19397
report—	17521
crop insurance fieldman and supervisor, examination announcement—	8164
Federal all-risk crop insurance, why—	20931
feed grain crop insurance program, general information—	2313
tobacco crop, protects your investment—	6627
Agricultural laborers, <i>see</i> Farm labor.	
Agricultural land, <i>see</i> Land.	

	Entry
Agricultural machinery, <i>see</i> Farm implements and machinery.	
Agricultural market reporters, examination announcement, amendment—	15348
Agricultural Marketing Service:	
activities (periodical)—	3220
AMS series—	5-8, 1673-75, 4177-85, 5787-93, 7877-85, 9006-12, 11734-737, 13557-560, 15182-184, 16931, 19044-45, 20895.
appropriations, 1965, Agriculture Dept., hearings—	10286
reports, checklist—	3315
reports, publications, list—	4183
service and regulatory announcements—	9, 11739, 19046-47
Agricultural occupations, employment outlook—	13057
Agricultural outlook, <i>see</i> Agriculture.	
Agricultural policy, <i>see</i> Agriculture.	
Agricultural products:	
agricultural commodities, agreement with—	
Bolivia—	775, 9810, 15110
Brazil—	5702, 15121
Chile—	18979
China—	15124, 16874
Colombia—	1621, 9833
Congo (Leopoldville)—	3155-56, 9812, 15107, 21883-884, 21892
Dominican Republic—	3148
Greece—	3157, 20824
Guinea—	5707
Iceland—	9827-28
India—	5708, 13473
Indonesia—	20831
Iran—	18964
Iraq—	5705
Israel—	5709, 13648, 16877, 18973
Ivory Coast—	11641
Jordan—	11626
Korea, Republic—	11636, 16878
Pakistan—	9826
Paraguay—	9814-15, 21885
Peru—	11628
Philippines—	15116
Poland—	9818-19
Portugal—	11639
Senegal—	16879
Sudan—	7782, 11630
Syrian Arab Republic—	7784
Tunisia—	7785, 13467, 18983
United Arab Republic—	1611, 15115, 18980, 20836
Vietnam—	7790, 9817, 13474, 20826
Yugoslavia—	13476, 15108-109, 15111
agricultural prices (periodical)—	3222
CCC monthly saleslist—	3307
developing workable programs (address)—	5809
directory of Federal-State market news reports—	4184
European Economic Community, trade and finance, statistics—	14172, 15837
export sales to Soviet Union and Eastern European bloc countries, opinion of Attorney General—	5415
exports under PL 480, monetary effects of financing—	568
export trade, prospects and problems (remarks)—	7008
farm exports (address)—	20907
Federal stockpile inventories, report—	3212
food products, firms marketing, taxes paid—	6554
for-hire trucking of exempt farm products—	7032
foreign agricultural trade, monthly—	3518

	Entry
Agricultural products—Continued	
foreign trade—	
by commodities—	
calendar year 1963-----	14176
fiscal year 1962-63-----	6559
by countries—	
calendar year 1962-----	569
calendar year 1963-----	19624
fiscal year 1962-63-----	10457
foreign trade liberalization, benefits to producers (address)-----	16943
French West Indies, agricultural production and trade-----	12315
India's trade trends-----	6558
loading out produce in warehouses, 3 methods-----	11773
market for U.S. farm products, Japan, trends and developments in economy affecting, 1950-62-----	14174
marketing—	
act of 1946, sec. 204(b), administrative manual-----	16962
activities-----	3220
bulletins-----	31, 1705, 4206, 7928, 11768, 15211-213, 20928
firms, rising depreciation of assets, some causes and implications-----	4612
publications, price list-----	15036
research reports-----	32-36, 1706-8, 4207-11, 5832-38, 7929-32, 9947-53, 11769-778, 13586-592, 15214-215, 16957-959, 19086-89, 20929
Nicaragua, recent shifts in farm output and trade-----	12314
orderly liquidation of stocks of agricultural commodities held by Commodity Credit Corporation and expansion of markets for surplus agricultural commodities-----	13594
Philippine supply and demand, implications for U.S. exports-----	2264
price supports, active and announced programs-----	3210
prices, annual summary, 1963-----	15128
production research reports-----	4219-21, 5856-59, 7941, 16969
purchase reports-----	3953
retail stores-----	
customer service for produce departments-----	15211
produce display work methods-----	15212
produce aisles area arrangement-----	15213
sales reports-----	4006
standards, U.S.—	
checklist-----	15182
grades of processed fruit, vegetables, etc-----	19044
tropical products, foreign agriculture circulars-----	3520
USSR—	
farm production, 1963-----	8473
retail commodity turnover, principles of planning-----	16200
world agricultural production and trade, statistical report-----	4166
world agricultural situation, 1964-----	4614
world markets for American agriculture (address)-----	5866
see also Crops—also names or classes of products.	
Agricultural research, see Agriculture.	
Agricultural Research Laboratory, University of Tennessee, research progress report-----	8067
Agricultural Research Service: appropriations, 1965, Agriculture Dept., hearings-----	10286

	Entry
Agricultural Research Service—Con.	
ARS series-----	11-16, 1676-87, 4188-91, 5796-97, 7890-97, 9916-21, 11740, 13563-571, 15194-199, 16932-934, 19051-55, 20896-902
brucellosis in cattle, eradication, weaknesses in animal disease control activities, GAO report-----	12501
scientific careers-----	5839
Agricultural science review-----	547, 3224
Agricultural situation, see Agriculture.	
Agricultural situation (periodical)-----	3225
Agricultural Stabilization and Conservation Service: appropriations, 1965, Agriculture Dept., hearings-----	10286
Evanston Commodity Office, unnecessary costs of leasing rather than purchase of electronic data processing equipment, GAO report-----	10620
purchase reports-----	3953
rural areas development programs, aids to ASCS committeemen-----	9962
sales reports-----	4006
Agricultural statistics, see Agriculture.	
Agricultural supplies: Federal item identification guides for supply cataloging-----	12294
supplements-----	3475
Agricultural trade development and assistance act of 1954: activities under, semiannual report-----	13923, 19452
agriculture, food, fishes, forestry, translation program, OTS bibliography-----	11662
biological sciences, translation program, OTS bibliography-----	11663
financial procedures under Public Law 480-----	12318
fishery amendment, administration, hearing-----	8357
food for peace, newsletter about activities under PL 480-----	8515
Library of Congress Public Law 480 project—	
accessions list—	
India-----	3590
Israel-----	14717
Middle East-----	8721
Pakistan-----	3834
newsletter-----	3679
monetary effects of financing exports under titles 1 and 4—	
programs, operations, extend, etc.—	
hearings-----	8356, 17863
law-----	21130
reports-----	17545, 17608, 17785, 19464, 21192
science and technology, translation program, OTS bibliography-----	11664
translation program, in process, 1964, list-----	9854
United Arab Republic, assistance under Public law 480 and other programs-----	12316
Agricultural workers, see Farm labor.	
Agriculture:	
Africa and West Asia, 1964 situation-----	6557
agricultural act of 1949, amend—	
hearing-----	12115
laws-----	17388, 19393
reports-----	10244, 17772
agricultural adjustment act, amend—	
law-----	17328
reports-----	8412, 13930, 17721
agricultural aspects of Economic opportunity act of 1964-----	12116



# INDEX 1964

	Entry
<b>Agriculture—Continued</b>	
agricultural economic reports.....	565,
4011-13, 9554-54, 8408, 10453,	
455, 12807-809, 18385, 17900-	
909, 19020, 21258-259,	
<b>Agricultural economics, periodical</b>	
<b>reports, list.....</b>	<b>4218</b>
agricultural economics research.....	8219
agricultural effectiveness of principal types of mineral fertilizers, USSR study.....	9294
agricultural outlook digest.....	3221
agricultural prices, annual summary.....	15128
agricultural prices (periodical).....	3222
agricultural program of John F. Kennedy.....	11749
agricultural research (periodical).....	3223
agricultural science in full development, Rumanian study.....	18236
agricultural science review.....	547, 3224
agricultural situation (periodical).....	3225
agriculture and alliance for progress (address).....	11750
agriculture and related exemptions under Fair labor standards act.....	13511
agriculture handbooks.....	20,
1093-96, 4194-95, 5813-16,	
7009-12, 9950-33, 11751-752,	
13578-581, 15205-207, 16944-	
948, 20908-909,	
<b>agriculture information bulletins</b> .....	<b>21-22,</b>
1997, 4196-97, 5817-19, 9934-37,	
11753, 13582, 19063-65, 20910-	
911,	
<b>agronomical problems of Soviet East</b> .....	<b>20221</b>
American agriculture and international rural development (address).....	16949
American books and periodicals, list.....	1489
American, our 100,000 biggest farms, their relative position.....	6553
aviation, superior performance, USSR study.....	21648
balance sheet, 1964.....	20911
bibliography.....	3041, 3279
PL-480 translation program.....	11662
serial publications indexed in.....	14930
census, 1964, facts about.....	17110
census publications, price list.....	13389
challenges of future (address).....	1690
charts, 1964, handbook.....	16948
chemical processes, economic effectiveness, USSR study.....	10819
chemistry, USSR studies.....	5145, 18334
code of Federal regulations.....	6645-50,
6657-58, 8554-55, 8564-65,	
10529, 12400,	
<b>Communist China—</b>	
agricultural situation and crop prospects.....	21262
translations.....	911,
985, 1108, 1184, 1225, 1340, 2571,	
2594, 2609, 2684, 2799, 2926,	
4940, 4989, 5057, 5243, 5264,	
5390, 6919, 6932, 7036, 7081,	
7106, 8940, 9183, 10798, 10951,	
11061, 12650, 12822, 13017,	
14656, 16295, 16423, 18208,	
18399, 18474, 19941, 20155,	
20177, 20395, 21467, 21562,	
cooperative State-Federal research.....	19065
decisions.....	3226
<b>East European—</b>	
situation, 1964.....	8474
translations.....	899,
944, 1010, 1045, 1066, 1137, 1210,	
2536, 2551, 2564, 2693, 2879,	
4919, 4944, 5124, 5186, 5213,	
5227, 5318, 5395, 7084, 7099,	

	Entry
<b>Agriculture—Continued</b>	
<b>East European—Continued</b>	
<b>translations—continued</b>	
7115, 7119, 7214, 7240, 7364,	
8873, 8900, 9057, 9086, 9241,	
9313, 9358, 10721, 10773, 10830,	
10857, 10873, 10897, 10923,	
11048, 11059, 11074, 11146,	
11157, 11217, 12599, 12620,	
12673, 12693, 12714, 12749,	
12766, 12798, 12814, 12831,	
12871, 12894, 12915, 12947,	
13000, 14439, 14459, 14501,	
14559, 14589, 14611, 14625,	
16040, 16058, 16098, 16227,	
16321, 16350, 16378, 16405,	
16528, 16550, 18105, 18247,	
18272, 18299, 18328, 18352,	
18427, 18463, 18493, 18510,	
18537, 19879, 19980, 20074,	
20178, 20192, 20328, 20349,	
20361, 21386, 21417, 21512,	
21531, 21563, 21572, 21581,	
21616, 21627,	
structural changes, observations, farm problems and programs of Federal Government (remarks).....	7115
1713, 1715	
farming practices, and concentrations of fission, products in milk.....	10833
fertilization, USSR studies.....	14594
finance review.....	15836
supplement.....	2259
food costs, farm prices, compilation.....	10284, 15582
foreign agricultural economic reports.....	507-508,
2266, 4614, 6558, 12318, 14173-	
174, 15838, 19623, 21262,	
<b>Foreign Agricultural Service, miscellaneous FAS-M series.....</b>	<b>766,</b>
2347-48, 8627, 10583, 12429-430,	
14289-292, 18042, 19744, 21323,	
foreign agriculture (periodical).....	3519
foreign agriculture circulars.....	3520
foreign agriculture, publications, price list.....	15036
foreign agriculture reports.....	764-765,
15933	
foreign governments' policies.....	5813
forestry, agricultural programs (address).....	13577
future international meetings, world list.....	4167
Gnam, establish services—	
hearings.....	6336
law.....	19392
reports.....	502, 17573, 21188
harmonizing national agricultural policies with international trade obligations (address).....	5808
higher education instruction, programs, activities, developments.....	12323
how United States improved its agriculture.....	8476
improved methods of farming, problems (address).....	5811
income tax reduction, provisions of significance to farmers.....	8470
India.....	8471
India's agricultural trade, trends.....	6558
Ivory Coast, agricultural economy.....	10456
Japanese experience, applicability, key to peace and plenty in world of future (address).....	5807
21261	
Malaysia.....	21261
mechanization important means for intensification of production, USSR.....	9047
mechanization problems, Albanian study.....	1154
migrants, selected films.....	16843
Mongolian studies.....	18533

# JANUARY-DECEMBER

	Entry
<b>Agriculture—Continued</b>	
North Korea, Communist Party's agricultural policy.....	11060
nuclear science applications.....	130
nuts, domestic tree, industry, economic appraisal.....	21259
people act through community participation and by working together, exhibit depicts advances.....	1646
pests, control, USSR study.....	10919
policy, European Economic Community.....	1324
policy, expanding job and income opportunities in rural America (address).....	5802
production and marketing, future organization and control (paper).....	15188
production, intensification, USSR study.....	7080
program, message from the President.....	6202
radiolotopes uses, bibliography.....	15283
recreation in agriculture (address).....	5855
role in world progress (address).....	5810
Rumania—	
research.....	20233
science, advances.....	10904
scientific research, study.....	21399
sciences, Soviet bloc conferences.....	12964
soil and geography, USSR studies.....	11108
Spanish, its competitive position.....	15838
State departments, directory, 1964.....	9906
statistical summary.....	4054
statistics, 1963.....	4193
stronghold of individualism in changing world (address).....	20023A
Tanganyika, agricultural economy, training and services needed.....	17910
Tunisia, organization, production, and trade.....	19091
U.S. Department of Agriculture, how it serves you.....	8472
USSR—	
agricultural enterprises, administration.....	19100
development under Communism, statements of N. S. Khrushchev.....	9029
electric power, poor utilization in production, because of insufficient capacity.....	16520
report of 1963 U.S. Agricultural Exchange Delegation.....	21568
science and technology, proposal for improved use of advanced methods.....	2266
specialists criticized, lack of specific assignments.....	12979
status and prospects of chemization.....	16205
translations.....	19805
2775, 2848, 2882, 4887, 7089, 7190, 7206, 8097, 10988, 14572, 18209, 18342, 18416, 18408, 19850, 19888, 20268, 20320, 20334, 21421, 21449, 21624.....	1074
virgin lands policy, role of Khrushchev, French anticommunist analysis.....	5381
vocational education, farm mechanics instruction, training program suggestions.....	1841
workers in agricultural subjects in land-grant colleges and experiment stations.....	9092
world agricultural production and trade, statistical report.....	15849
world agriculture, graphic summary.....	7009
	20909
	4166
	19090

	Entry
<b>Agriculture—Continued</b>	
world situation, 1964.....	4014
Africa and West Asia.....	6557
Eastern Europe.....	8474
Far East, Communist China, Oceania.....	8475
Western Hemisphere.....	6556
world's stake in U.S. agriculture.....	2317
yearbook 1964—	
departmental edition.....	16952
document edition.....	17450
see also Dry farming—Farm labor—Farmers' cooperative organizations—Farms—also headings beginning Agricultural.	
<b>Agriculture Administration Building, historical study.....</b>	13384
<b>Agriculture and Forestry Committee, Senate:</b>	
calendar.....	8662
hearings.....	6491-92, 14124, 17863
reports.....	502-503, 6467, 6489, 8411-12, 10405, 14074, 17721, 17704-772, 17785
<b>Agriculture Committee, House:</b>	
calendar.....	3643
committee prints.....	10283-284, 15582
hearings.....	380-387, 4485-88, 6335-86, 8352-57, 102-2, 12114-116, 13986-987, 15578-581, 19495-497, 21109.
<b>Investigations and studies, expenses, report.....</b>	17584
<b>reports.....</b>	4480, 4484, 8286, 8290, 10288-239, 10242-244, 10249, 10272, 13930, 13949, 15513-516, 15536, 15506, 17521, 17523, 17536-537, 17545, 21188, 21190-192.
<b>travel authorization, report.....</b>	13960
<b>Agriculture Department:</b>	
appropriations, 1964—	
deficiency, hearings.....	10285
law.....	1978
report.....	2100
supplemental, proposal.....	10162, 14025
appropriations, 1965—	
hearings.....	10286, 15790, 17630
law.....	17431
proposal.....	15418
reports.....	10258, 15771, 17605
budget, 1965, amendments.....	14024-25, 15609
<b>California growers and USDA (address).....</b>	5822
<b>communications, competition and role of USDA (address).....</b>	7916
<b>cotton and cotton linters, classification for foreign growth, regulations under cotton standards act.....</b>	19046
<b>Evanston Commodity Office, Agricultural Stabilization and Conservation Service, unnecessary costs of leasing rather than purchase of electronic data processing equipment, GAO report.....</b>	10620
<b>field staff, Foreign Service list.....</b>	3520
<b>films, catalog.....</b>	16944
<b>grading service, approved dairy plants, list.....</b>	15184
<b>guide to understanding.....</b>	18875
<b>handling of grain storage operations of Billie Sol Estes, hearings.....</b>	14001
<b>handling of pooled cotton allotments of Billie Sol Estes—</b>	
hearings.....	532
report.....	19584
<b>how it serves you.....</b>	19100
<b>import-export overtime law, clarify, report.....</b>	15514
<b>injury compensation guide.....</b>	1538

# INDEX 1964

	Entry
<b>Agriculture Department—Continued</b>	
integration of research work with land-grant colleges and universities (address)-----	5865
leaflets-----	29-30
1702-4, 4205, 5829-31, 7925-27, 9945-46, 11763-767, 13584-585, 15209-210, 16956, 19082-85, 20924-927.	
marketing bulletins-----	31
1705, 4206, 7928, 11768, 15211-213, 20928.	
marketing research reports-----	32-36
1706-8, 4207-11, 5832-38, 7929-32, 9947-53, 11769-773, 13586-592, 15214-215, 16957-959, 19086-89, 20929.	
ment inspection procedures, manual-----	20904
miscellaneous publications-----	37-38
1709-11, 4212-16, 5839-41, 7933-36, 9954-56, 11774, 13593, 16960-962, 19090-99, 20930.	
PA [program aid] series-----	39
4217, 5842-54, 7937-39, 9957-62, 11776-779, 13595-596, 15216-220, 16964-968, 19100-101, 20931-932.	
policy and California agriculture (address)-----	5821
production research reports-----	4219-21
5856-59, 7941, 16969	
profiles, careers-----	20933
programs affecting beef cattle industry (address)-----	5823
public services (address)-----	5860
publications and motion pictures, monthly list-----	3741
publications on rural civil defense, index-----	15343
radiological monitoring handbook, errata-----	5814
regulatory activities (address)-----	5827
releases-----	3866
research into health factors in tobacco use, authorize-----	
hearings-----	8353
report-----	4484
service, USDA's report to consumers (periodical)-----	18160
services, consumer's guide-----	7936
statistical bulletins-----	40-41
1720-21, 5861, 7946-49, 9963-65, 11780, 13598-599, 15222, 16970-972, 19102.	
technical bulletins-----	42-44
1722-23, 5862-64, 7950-53, 15223-224, 16973-974, 10103-105.	
USDA, employee news bulletin-----	4128
varied programs serving needs of all people (address)-----	5812
Agrochemistry, <i>see</i> Agricultural chemistry.	
Agronomy, <i>see</i> Agriculture.	
Aguinardo, Pedro, relief-----	10197, 14041, 17169
Ahn, Kil Ja, <i>see</i> Kil Ja Ahn.	
Al Ja Kim, <i>see</i> Ast, Kathryn C.	
AIB series-----	21-22
1697, 4196-97, 5817-19, 9934-37, 11753, 13582, 19063-65, 20910-911.	
AID, <i>see</i> International Development Agency.	
Aid to families with dependent children, <i>see</i> Children—Families—Public assistance.	
Aides, hotel and motel housekeeping, suggested training program-----	15848
Aids to navigation, <i>see</i> Navigation.	
Aids to students-----	21365

	Entry
<b>Air:</b>	
electron-ion recombination, microwave interferometer measurements-----	1452
fused fluoride coatings as solid lubricants in-----	16686
hot rolling molybdenum conditions, USSR study-----	1011
hypersonic aerodynamic characteristics of winged shapes in air and helium, comparison-----	14866
ideal-gas tables for oblique-shock flow parameters-----	9592
injection through porous surface and through slots, effect on turbulent skin friction at Mach 3. management of our air resources (address)-----	5656
rapid helium-air analyzer can measure other binary gas mixtures, temperatures and stream flow data, Convict Creek, Calif., <i>see also</i> Air pollution—Atmosphere.	7491
Air and Space Museum, <i>see</i> National Air and Space Museum.	10577
Air bearings, <i>see</i> Bearings (machinery).	
Air carriers:	
air transport at speeds of 2330 kilometers per hour in 1963, Rumanian study-----	5300
airborne VOR receiving equipment, technical standard order-----	4684
aircraft certification and operation rules, etc., civil air regulations amendments-----	4678, 10506
8528-29, 15336	
airlines statistics handbook-----	1831
Alaska routes, certificated, map-----	
analytical charts and summaries, including supplemental air carrier statistics-----	3230
blind passengers, guides-----	
hearing-----	10322
reports-----	13973, 17541
certificated, accounts and reports, uniform system-----	4108
certificated route-----	
airport activity statistics-----	1830, 6059, 15334
overseas and foreign, and within Hawaii and Alaska, certification and operation rules, civil air regulations amendments-----	10505, 12367-370, 15880
certification and operation rules, civil air regulations, amendments-----	14222
fare situation, changes in fare structure, etc. (remarks)-----	4364
financial statistics-----	
quarterly and 12-month-----	3231
supplement-----	3230
foreign operations, Federal aviation regulations-----	8533
future of air cargo services (remarks)-----	6063
international transportation rates, report-----	454
irregular and off-route rules, civil aeronautics manual-----	3326
supplement-----	647
operations inspector's handbook-----	19668
scheduled-----	
helicopter certification and operation rules, civil air regulations amendments-----	12377
helicopters, certification and operations, Federal aviation regulations-----	21291
interstate, certification and operation rules-----	
civil air regulations amendments-----	10504, 12361-366, 15880
Manual-----	8325

# JANUARY-DECEMBER

	Entry
Air carriers—Continued	
situation, services, etc. (address)...	17122
supplemental, aircraft certification and operation rules, etc., civil air regulations amendments...	12372-375
traffic statistics—	
monthly and 12-month.....	3232
supplement.....	3230
transport services, Mexico City-Detroit route, agreement with Mexico.....	20841
United States carriers—	
international routes, map.....	1832
local service routes, certificated, map.....	1833
trunkline routes, certificated, map.....	1834
Air Cleaning Conference, AEC, Oak Ridge National Laboratory, Oct. 20-23, 1963, proceedings.....	8080
Air conditioners, unnecessary procurement by Army Dept., GAO report.....	4770
Air conditioning:	
equipment—	
current industrial report, 1962.....	17090
Federal item identification guides for supply cataloging.....	12292
supplements.....	3473
mechanical design, engineering manual, changes.....	620, 4666
Air-conditioning mechanics, see Mechanics (persons).	
Air crews, see Flight crews.	
Air-cured tobacco, see Tobacco.	
Air cushion vehicles, Gemini 1-ton, amphibious, off-highway, air-transportable vehicle concept evaluation program.....	21908
Air filters, see Filters and filtration.	
Air flow, see Flow.	
Air Force:	
Air Staff, organization chart.....	3236
airman, official journal.....	3243
airman performance prediction by career field from selection and basic training variables.....	11802
airman specialties, development of standard list of work requirement factors.....	4256
airmen—	
job qualification ratings relation to performance ratings of basic training instructors.....	20971
qualifying examination, use to predict completion of basic training.....	13635
test items across forms, comparison.....	9984
band, America's musical ambassadors.....	15244
cargo handling system A/A32H-4, evaluation.....	7971
civil engineer (periodical).....	3233
civilian travel and transportation, temporary duty, general information, etc., pamphlet.....	60
counseling form, development for use by supervising officers.....	15234
demonstration team.....	1735
dental officer, effect of ancillary personnel on treatment capability.....	70
effect of sorting procedure on accuracy of ordinal ranking.....	7994
enlisted personnel, relief.....	1886, 2146
glossary of standardized terms and definitions, manual.....	7973
hangars, pumping station for fire protection, engineering manual.....	4667
indispensable weapon, personnel management.....	59
instructors' journal.....	3598

	Entry
Air Force—Continued	
maintenance technical data system study.....	51
medical and dental officers, relief—	
law.....	8222
reports.....	377, 8409
medical service, laboratory procedures in clinical mycology, manual.....	1733
normative distributions of AQE aptitude indexes for high-school-age boys.....	19162
officer management, project M, data development and analyses in support.....	19164
officers—	
erroneously paid uniform allowances, relief—	
hearing.....	19591
law.....	19426
reports.....	13934, 17850
group ratings of importance and obtainability of selected job characteristics.....	9985
leadership.....	11789
qualifying test, development and standardization.....	11803
Pacific, PACAF basic bibliographies.....	68, 1741, 5892, 9982
personnel restraint systems study, CH-47 Vertol Chinook, crash injury evaluation.....	21905-906
personnel, taxable income and taxes withheld from pay, erroneous reporting, GAO report.....	2401
procurement instruction, revisions.....	3234
register—	
departmental editions.....	5888-89
document editions.....	6198-99
research accomplishment.....	17001
research resumes, 1963.....	7992
scientific information activities.....	5573
scientific research bibliography, 1957-58.....	16986
Scientific Research Office, nuclear physics program, history.....	67
target detection, visual display enhancement and techniques of color filter, study.....	9980
weather for aircrews, manual, change.....	11792
weather officers, contribution of education to rated effectiveness.....	20970
see also Army Air Force—Retired officers, etc.	
Air Force Academy, Colo.:	
assembly, 5th, final report.....	45
cadets, class of 1964, predicting first year achievement.....	19163
cadets, increase authorized strength, revised appointment law—	
hearing.....	4571
law.....	6187
report.....	4567
catalog, 1964-65.....	11782
special bibliography series.....	20934
Air Force Cambridge Research Laboratories:	
AFCRL series.....	52-56, 1725-27, 4228-31, 5871-76, 7960-67, 9968-73, 13600-611, 15226, 16975-985, 19106-133.
Air Force survey in geophysics.....	7979, 13636-627, 16993, 19139
environmental research papers.....	11709, 13628-630, 16995-998, 19149-153, 20958-966.
geophysics and space data bulletin.....	20967
instrumentation for geophysics and astrophysics.....	65-66, 1737-39, 4254
instrumentation papers.....	13631-632, 19156-159



# INDEX 1964

	Entry		Entry
Air Force Cambridge Research Laboratories—Continued		Air Force Department—Continued	
physical sciences research papers	13636-645, 17003-8, 19105-176	employees at Hickam Air Force Base, Hawaii, relief	324, 6430, 8211
report on research	13600	environmental research papers	11790, 13628-630, 16095-998, 19149-153, 20958-960
research library, automated routines in technical services (paper)	7967	ESD technical documentary reports	63-64, 1736, 5890-91, 7989, 9980-81, 11798, 16994, 20957
special reports	15243, 17010, 19187-189	excessive costs—	
Air Force Department:		incurred in using contractor-furnished personnel instead of Government personnel by Pacific region, Ground Electronics Engineering Installation Agency, Air Force Logistics Command, GAO report	8718
AAL technical documentary reports	4242-50, 7980-83, 9976-79, 19140-148, 20955-956	leasing compared with buying electronic data processing equipment at Kirtland Air Force Base, GAO report	4758
AAL technical notes	4251-52, 7984-87	result of multiple management of supplies at Atlantic Missile Range, GAO report	8716
AEDC technical documentary reports	4253, 7988	excessive stocks at selected bases of 5th Air Force in Japan and Korea, GAO report	6766
aerospace vehicles, information handbook	13625	forms management office functions, manual	11788
AFCRL series	52-56, 1725-27, 4228-31, 5871-76, 7960-67, 9968-73, 13600-611, 15226, 16975-985, 19106-133, 20935-946	increased costs of ammonium perchlorate for solid-propellant missile motors, GAO report	6769
AFFTC technical documentary reports	1728-32, 4232-34, 5877-84, 7968-71, 9974-75, 11786-787, 13612-623, 15227, 16987-988, 19134-135, 20947-948	instrumentation for geophysics and astrophysics	65-66, 1737-39, 4254
AFFTC technical information handbook	7972	instrumentation papers	13631-632, 19156-159
AFOSR series	16986	land conveyance to Oroville, Calif.—	
Air Force manuals	57-58, 1733, 4235-39, 5885-89, 7973-74, 11788-793, 13624, 16989, 19136-137, 20949-950	law	17246
Air Force pamphlets	59-62, 1774, 4240-41, 5887, 7975-78, 11794-795, 13625, 16990-992, 19138, 20951-954	reports	867, 14114
Air Force surveys in geophysics	7979, 13626-627, 16993, 19139	lunar charts and mosaic series	1740, 4255, 7991, 15228-229, 17000, 20968
aircraft engines, failure to separate accessories from, GAO report	4767	OAR series	67, 7992, 11801, 15230-231, 17001, 19160
appropriations, 1964—		overpricing of B-58 aircraft bomber recording systems by Melpar, Inc., on fixed-price purchase order 569, GAO report	6775
deficiency, hearings	10285	overpricing of B-58 aircraft components under purchase orders issued to Sperry Gyroscope Co., by Convair, GAO report	10611
military construction, hearings	517	Personnel Research Laboratory, technical documentary reports	4256, 7993-94, 9983-85, 11802-803, 13633-635, 15232-235, 17002, 19161-164, 20970-971
appropriations, 1965, military construction, hearings	10291, 12118	physical sciences research papers	13636-645, 17003-8, 19165-176
ASD technical documentary reports	46-50, 4223-26, 5867-69, 7955-59, 11783	procurement—	
ASD technical reports	4227, 5870	AN/ARN 21 C TACAN radio components, unnecessary costs incurred through failure to accept option offer, GAO report	6785
Assistant Secretary, nomination of—		guide for pricing, Air Force pamphlet	7975
Charles, Robert H., hearings	523	spare parts under contracts for related aeronautical equipment, GAO report	4768
Flax, Alexander H., hearings	521	RADC technical documentary reports	4257, 7996, 20972
Marks, Leonard, Jr., hearing	14127	RADC technical report	69
Bomarc A weapon system, overstated cost estimates included in target prices of incentive contracts with Boeing Company, GAO report	12492	report, 1963	17896
contracts with Fairchild Camera and Instrument Corp., overpricing CAX-12 aerial reconnaissance cameras, GAO report	8729	research contracts, negotiation and award, case study—	
contracts with Space Corporation for modification of aircraft engine test stands, overestimated costs, GAO report	4768	committee print	8366
cost-plus-a-fixed-fee prime contract, overpricing B-58 electrical power systems purchased from Westinghouse Electric Corp. by General Dynamics Corp., GAO report	8728	hearings	6343
electrical power system contracts with Westinghouse, overpricing, GAO report	8730		

Entry

211  
799,  
49-

-64,  
-81,

718

758

716

766

788

769

254

332,

159

246

114

40,

900,

67,

901,

775

611

56,

903,

902,

445,

176

785

975

766

972

69

896

366

343

Entry

Air Force Department—Continued	
small business participation in Government procurement, 1963, conference	12283
special reports of Air Force Cambridge Research Laboratories, 15243, 17016, 19187-189	80-82, 9989
translation series	4261-63, 5912-17, 8007-8, 9989
uneconomical leasing of motor vehicles for use in assembly and checkout operations at Minute-man missile launch sites and avoidance of congressional controls in acquisition, GAO report	19762
uneconomical procurement of electronic equipment under contract with Grumman Aircraft Engineering Corporation, GAO report	2406
uneconomical replacement of vehicles, Fuchu Air Station, Japan, GAO report	6783
unnecessary cost to Government through leasing of electronic data processing systems by General Dynamics/Astronautics, Division of General Dynamics Corp., GAO report	19764
unnecessary costs to Government by not using surplus stockpiled materials to satisfy defense contract needs, GAO report	10617
unnecessary packaging costs incurred in procurement of repair kits from Hamilton Standard Division, United Aircraft Corporation, GAO report	12499
unnecessary procurement of office furniture, GAO report	2409
unnecessary procurement resulting from failure to review requirements for nonrecoverable spare parts, GAO review	8744
use of polygraphs, hearing	10315
use of unsuitable materials to construct airfield pavements at Selfridge Air Force Base, Mount Clemens, Mich., GAO report	10628
WADD technical reports	1750, 5918, 13652
wasteful practices in management of age-controlled aeronautical spare parts, GAO report	8745
Air Force Flight Test Center: AFFTC real-time range data acquisition and transmission system	5878
technical documentary reports	1728-32, 4232-34, 5877-84, 7968-71, 9974-75, 11786-787, 13612-623, 13227, 16987-988, 19134-135, 20947-948
technical information handbook	7972
test facilities handbook	7972
Air Force Logistics Command, excessive costs incurred in using contractor-furnished personnel instead of Government personnel by Pacific region, Ground Electronics Engineering Installation Agency, GAO report	8718
Air Force Medical Service: digest	4109
report, June 30, 1960-June 30, 1962	4265
Air Force Office of Scientific Research, AFOSR series	16986
Air Force Reserve: air reservist (periodical)	3235

Entry

Air Force Reserve—Continued	
officers, promotion to existing unit vacancies, authorize—law	19428
reports	13940, 17832
see also Pay, allowances, etc.	
Air Force ROTC, see Reserve Officers' Training Corps, Air Force	
Air Force supplies, see Military supplies	
Air Force Systems Command: press releases	3867
report 1963	11796
Air frames, see Airframes	
Air heaters: electric arc—	
equilibrium sonic-flow method for evaluating performance	9574
magnetically rotated, air heater employing strong magnetic field and copper electrodes, description and operational procedures	1463
Air National Guard, see National Guard	
Air navigation: facilities maintenance cost accounting handbook	649
facility outage and equipment failure report, FAA handbook	12380
flying training, Air Force manual, change	4235
navigator (periodical)	3778
non-Federal facilities, AAA regulations	19675
practical navigation aids, H.O. publication	9676
semiautomatic flight inspection program of FAA unnecessary costs incurred, GAO report	8738
sight reduction tables, selected stars	14995
TACAN radio components, AN/ARN 21C, procurement costs of Air Force Dept., GAO report	6785
see also Aeronautics	
Air navigation charts, see Maps and charts	
Air pilots, see Aviators	
Air pollution: Air Cleaning Conference, AEC, Oak Ridge National Laboratory, Oct. 20-23, 1963, proceedings, air pollution and purification, bibliography	8080
clean air, abatement of pollution, progress and programs, hearings	10434, 15819
control program support under clean air act	11548
discharges in atmosphere, dispersion, method for calculations, USSR study	4912
kraft pulping industry, bibliography	15047
laws, compilation	12144
Ocean Breeze and Dry Gulch diffusion programs, data, etc.	5871
prevention and control, clean air act—law	1935
description	4825
reports	582, 465
Public Health Service grants for control programs, general information	18919
respiratory irritants, need for control (address)	7688
sanitary protection in USA, Soviet report	15062
State laws, digest	5651, 21845
Air reservist (periodical)	3285
Air routes, see Airways	
Air safety, see Safety of life.	



# INDEX 1964

Entry	Entry
Air space utilization, <i>see</i> Air traffic.	Air Traffic Service—Continued
Air speed:	manuals ----- 3345
harmonic drive speed reducers for	4266, 5919-20, 9990, 13653
helicopter applications, feasibility investigation-----	service C weather schedules... 4271, 20974
low-speed characteristics of transport 4-engine model with large bodies mounted above fuselage... 9591	Air transportation, <i>see</i> Aeronautics—Air carriers—Transportation—Travel.
minimum flying speed of delta-wing airplane, demonstrating-----	Air University Library, index to military periodicals----- 3238
T-37C category 2 performance test ----- 4234	Air University review----- 3239
Air-supported tentage-----	Air warfare, anti-air warfare training program, procedures, etc... 20707
Air taxi operators and commercial operators of small aircraft, Federal aviation regulations... 12384	Airborne operations:
Air terminals, <i>see</i> Terminals (transportation).	cavalry troop, etc., field manual, change ----- 15264
Air-to-surface pickup, Fulton air-to-ground system for Caribou aircraft ----- 11667	electronic designer's shock and vibration guide for airborne applications ----- 1750
Air traffic:	World War II and Korean War, USAF ----- 4264
activity, FAA airways system—summary 1963----- 8530	Airborne VOR receiving equipment (for air carrier aircraft)----- 4684
summary 1964----- 17963	Aircraft:
air carrier statistics—monthly and 12-month----- 3232	A-4 series, automatic flight control systems, unnecessary costs incurred in purchase, Navy Dept., GAO report ----- 19766
supplement ----- 3230	AFFTC real-time range data acquisition and transmission system ----- 5878
control—	agricultural aviation, superior performance, USSR study ----- 21648
agreement with Canada----- 5706	air taxi operators and commercial operators of small aircraft, Federal aviation regulations... 12384
ARTS, advanced radar traffic control system, Atlanta facility training manual----- 14221	aircraft and aircraft engines, current industrial reports... 3390, 8114
automatic, analysis of effects of severe weather factor----- 11702	aircraft and parts industry, review of 1963, outlook for 1964----- 6022
automatic data processing operations, Boston, Mass., and Washington, D.C. centers, inadequate administration by FAA, GAO report ----- 8723	aircraft and related products—certification, identification, etc., civil aeronautics manual----- 3321
contractions used by FAA, etc., handbook ----- 4267	identification and registration marking ----- 8531
control and communication mobile system, AN/TSQ-47, human engineering evaluation----- 5890	airworthiness—
electronic simulator systems, excessive costs incurred because of extended contractor-furnished technical services, etc... 10596	FAA directives----- 3247, 3451, 21287
evaluation of terminal radar service area concept ----- 4268	surplus military aircraft, civil air regulations ----- 4675-77
facilities maintenance cost accounting handbook----- 649	aquaplaning, phenomenon----- 202
facility operations----- 1752	Army, noise problems associated with operation----- 5949
5010, 11810, 15247, 19192-193	B-58, bomber recording system, overpricing by Melpar, Inc., on fixed-price purchase order 509, GAO report ----- 6775
facility outage and equipment failure report----- 12380	buying, materiel procurement for Army Air Forces, World War II, special studies----- 20462
national airspace utilization system, design, status report... 5717	Caribou, Fulton air-to-ground pickup system----- 11667
procedures ----- 3237, 19190	certification and operation rules—
en route IFR survey, peak day, 1963 ----- 4679	certificated route air carriers, etc., civil air regulations amendments ----- 10505, 12366-370
charts ----- 1751	civil air regulations, amendments ----- 14222, 15880
holding pattern criteria, FAA regulations, change ----- 4680	supplemental air carriers, etc., civil air regulations----- 648
management problems, pre-employment, etc., experience compared with aptitude tests in predicting performance of control specialists ----- 13733	amendments ----- 4678, 8528-29, 10506, 12372-375
patterns and community characteristics ----- 83	certification, identification, etc.—
security control, FAA regulations, amdt ----- 17968	civil aeronautics manual, supplement ----- 6616
special rules and airport patterns, Federal aviation regulations... 2306	civil air regulations, amendments ----- 2304, 4676
4681, 8532, 14229	civil—
Air Traffic Service:	active, by State and county----- 4685
communications procedures, manual ----- 3345, 13654	register ----- 6733, 18033
changes ----- 4266, 5919, 15245, 20975	United States, statistical study... 10513
fact book----- 8009	Coast Guard, authorization for procurement—
flight assistance service, manual, changes -- 5920, 9990, 13653, 15246	hearings ----- 6368, 6501
	reports ----- 6273, 6278, 6298, 6466

# JANUARY-DECEMBER

	Entry
<b>Aircraft—Continued</b>	
commercial supersonic transport research program, bibliography	6614
components and accessories, Federal item identification guides for supply cataloging	12297
supplements	3478
controls, spoiler-slot-deflector, on 45 sweptback wing-fuselage model, aerodynamic characteristics	1464
conveyances, validity of titles—	
law	13895
reports	12223
CV-2 DeHavilland Caribou, personnel restraint system study	20854
Defense Dept. military procurement, appropriations, 1965—	
hearings	6344
law	8358
reports	8227
6282, 6389, 6319, 6469	
earnings, relief from double taxation, agreement with Mexico	20834
emergency procedures over water—	
explosion-proof testing techniques for electrical, etc., equipment	3240
exports (addresses)	7957
fatigue life, influence of load randomization and ground-air-ground cycles	19346
Federal item identification guides for supply cataloging	21746
supplements	12297
flight crew compartment doors, closing and locking, civil air regulations amendment	3478
flight vehicular structures, metallic materials and elements	12365
14162, 19615	
flying at supersonic speeds, penetration of thunderstorms	12303
general aviation inspection aids, summary	14162
general operating and flight rules, Federal aviation regulations	11705
10512, 15884, 19674	
holders of type certificates, issuance, civil air regulations, amdt.	15886
identification of pipe, hose, and tube lines, military standard	6618
inspection, aviation aids, supplements	19674
interconnecting system components, use of flat electric cable, evaluation, final report	2304
KC-135A, heavy weight 3 engine takeoff performance test	21255
lag in altitude measuring systems	3554
maintenance, preventive maintenance, rebuilding and alteration, Federal aviation regulation	7659
14228	
maneuvering, application of acoustic theory to prediction of sonic-boom ground patterns	4232
manned free balloons, airworthiness requirements, Federal aviation regulations	4233
manufacturing occupations, employment outlook	14228
military—	
airworthiness certification of surplus aircraft, civil air regulations amdt.	20580
flights, agreement with India	15883
naval, design of electric systems, technical manual	7392
noise—	
and its problems, bibliography	4676-77
citizen's guide	1613
relation to design criteria for high performance vehicles	11497
11394	

	Entry
<b>Aircraft—Continued</b>	
oil analysis system for operational use in field, feasibility investigation	3172
parts supplied by overhaul contractors, unnecessary costs incurred by Army, GAO report	12496
performance measurement in flight simulation studies	14790
power plant on flexible wing, propeller whirl flutter, investigation	18744
private executive rather than commercial aircraft, unwarranted charges, Lockheed Missiles & Space Co., GAO report	21345
procurements, utilization, etc., deficiencies, Federal Aviation Agency, GAO report	8711
propulsion, gas turbines, USSR study	11169
registration, Federal aviation regulations	19672
reinforced plastics for flight vehicles, military handbook	14163
short-haul transport planning (address)	15333
spare parts—	
Defense Dept. action in canceling excessive procurements and redistribution programmed for or delivered to Portugal under military assistance program, GAO follow-up review	18088
failure to use excess in production, Navy Dept., GAO report	8722
specifications	3242
steel tube and fabric, structural analysis of crash impact configurations	16893
structural failures caused by corrosion, fatigue, and abrasion, engineering survey	19001
supersonic transport—	
boom propagation, effects of flight path and atmospheric variations	7562
economic aspects, bibliography	6611
mechanical cycling fatigue behavior of materials, exploratory studies	11351
transport of future, and present airports, Rumanian study	2510
supplemental type certificates and replacement parts, summary, supplements	4069
T35A electrical power systems, overpricing on contracts with Westinghouse, GAO report	8730
T39A limited stability and control tests	7969
titles and security documents, recording	17966
use in weather forecasting—	
instability lines and their environments as shown by aircraft soundings, etc.	11694
NASSP operations, 1962, analysis of selected data	11706
squal line investigations, development 1956-60	11693
vertical structure of 3 dry lines as revealed by aircraft traverses	11698
<b>V/STOL—</b>	
general information, NASA facts	16662
handling characteristics, effects of gross static directional stability	20603
propeller slipstream, effects on performance and stability	21911

# INDEX 1964

Entry	Entry
Aircraft—Continued	Airframes:
V/STOL—Continued	fiberglass-reinforced sandwich struc-
semispan tilting wing with 0.6-	ture, research..... 20857
diameter chord, single slotted	maintenance and repair, AF manual
flap, and single propeller ro-	----- 11791
tating up at tip, aerodynamic	maintenance, repair, and altera-
data..... 20571	tion, civil aeronautics manual..... 3324
simulation—	structural components, Federal
analog computer approach..... 5509	item identification guides for
analysis reports..... 13322, 15005	supply cataloging..... 12297
computational methods ana-	supplements..... 3478
log, study, equations of mo-	Airglow:
tion, etc..... 21826	aurorae and airglow, IGY program,
computational methods digital,	articles..... 13262, 21778
study, equations of motion,	aurorae and airglow, results of IGY
etc..... 21827	research..... 9621, 13263
VTOL—	day, (O,O) negative band of $N_2^+$
cold jets discharging from ex-	observation..... 9600
haust nozzles designed for	rocket spectrophotometer measure-
downwash suppression, dy-	ments in far ultraviolet..... 14889
namic pressure and thrust	visual observations of nightglow
characteristics..... 11397	from manned spacecraft..... 1487
full-scale fan-in-wing model, with	Airlift, see Transportation.
nose-fan pitch control, aero-	Airlines, see Air carriers.
dynamic characteristics and	Airmen:
ground effect..... 18737	air taxi operators and commercial
powered by 4 ducted tandem pro-	operators of small aircraft,
pellers, transition characteris-	Federal aviation regulations..... 12384
tics..... 9603	airman's guide—
VZ-2 model—	Pacific supplement..... 3245
effect of using stalling in transi-	United States..... 3244
tion..... 16698	supplement..... 3424
force-test investigation..... 16699	carefulness battery, validation
see also Aircraft accidents—Air-	against training school cri-
planes—Flight—Gliders (air-	teria..... 13633
craft)—Helicopters—Portable	international notams..... 3608
aircraft condition evaluator re-	specialties, development of stand-
corder—Seaplanes—Sonic	ard list of work requirement
boom—Spacecraft—Spin (air-	factors..... 4256
craft)—Stability of aircraft—	years of education as predictor of
also names of aircraft parts,	technical training success..... 9983
e.g. Propellers.	see also Air Force.
Aircraft accidents:	Airplanes:
Investigation reports..... 201,	airworthiness—
6058, 10087, 11922-923, 13786-	normal, utility, and acrobatic cat-
790.	egories, civil aeronautics man-
light plane safety, human factors	ual..... 3322
aspects..... 13737	transport categories—
Aircraft arresting equipment, see Ar-	civil aeronautics manual..... 3323
resting gear.	civil air regulations, amend-
Aircraft carriers:	ments..... 12359, 14222, 19667
evolution..... 21820	anniversary of powered flight, ob-
night landings, utilizing lumines-	servance (address)..... 1853
cent and reflective coatings as	Army, fundamentals of mainte-
visual aids..... 13328	nance, general information..... 21005
nuclear, overpricing of steam gener-	B-58 components, overpricing un-
ators, GAO report..... 6779	der purchase orders issued to
Aircraft engines, see Engines (air-	Sperry Gyroscope Co., Great
craft).	Neck, N.Y., by Convair, Fort
Aircraft fuel, see Motor fuel.	Worth, Tex., Air Force Dept.,
Aircraft materials, see Materials.	GAO report..... 10611
Aircraft plates, buckling load, imper-	B-58A minimum control speed test,
fections, main contributor to	bombers, B-52H performance and
scatter..... 19000	stability tests..... 1729
Aircraft repair stations, Federal avia-	C-46 nontransport category, cargo
tion regulations..... 14230	operations, civil air regula-
Aircrews, see Flight crews.	tions, amendment..... 15880
Airdrop of supplies and equipment..... 19219-	C-130 aircraft ramp unloading kit..... 5883
220	C-130E—
Airfields, see Airports—Aviation	category 2 performance tests..... 5880
fields—Pavements.	limited category 2 stability and
Airfoils:	control tests..... 13615
aerodynamic characteristics in non-	C-131E, crash injury investiga-
equilibrium ambient stream	tion..... 13494
based on linearized theory..... 13258	C-135 B—
ice formations, prediction of aero-	category 2 performance tests..... 13613
dynamic penalties caused..... 7534	appendix..... 13614
NACA65-424, boundary layer con-	limited category 2 stability and
trol by blowing to effect drag	control tests..... 13616
reduction, wind-tunnel investi-	canard configurations, effects of con-
gation..... 16692	figuration geometry on tran-
sharp and circularly blunt-wedge,	sonic aerodynamic character-
theoretical aerodynamic char-	istics..... 20595
acteristics..... 14904	

# JANUARY-DECEMBER

	Entry
Airplanes—Continued	
cockpit voice recorders, installation, civil air regulations, amendments	14222
commercial supersonic, U.S. development program, hearings	527
complex single-engine and light twin-engine, pilot transition courses	12428
delta-wing, demonstrating minimum flying speed	14870
descent performance with tilt wing and differential propeller thrust, wind-tunnel tests	20579
dynamic response to atmospheric turbulence	13257
effect of skewed wing-tip controls on highly-swept arrow wing at Mach number 2.03	20582
general operating and flight rules, Federal aviation regulations	21290
high-wing monoplane, use in low level spray applications, distribution patterns	16933
jet routes, establishment, Federal aviation regulations	2305, 21289
jet trainer, response to roughness of runways	11390
jet transport, pilot simulator study of loss of altitude in go-around from instrument-landing approach	1471
large, multi-jet cargo, wind-tunnel flutter studies of sweptback T-tail	9583
lateral-spread sonic-boom ground-pressure measurements at altitudes to 75,000 ft. and Mach numbers to 2.0	1461
Piper PA-18A, spray distribution patterns	13566
private pilot, flight training guide, radio-controlled parawing model, stalling and tumbling	19742
STOL, deflected slipstream transport having 4 interconnected propellers, performance, handling qualities, and operational characteristics	14852
supersonic configuration, parawings as auxiliary lifting devices, low-speed longitudinal aerodynamic investigation	9594
supersonic transport—cruising flight, dynamic stability characteristics, pilot evaluation	14879
effect of runway unevenness on dynamic response	18764
handling qualities in landing maneuver	21732
mechanical properties of superalloys	9602
NASA research on materials applicable to	18718
T-37C category 2 performance test	20566
T-38A performance test	4234
T-39A category 2 performance test	1731
TFX contract investigation, hearings	10135
3-engine, operation, civil air regulations amendments	4584
transport—cruising at Mach number 3, dynamic stability and control characteristics	10504, 10506
4-engine model with large bodies mounted above fuselage, low-speed characteristics	20607
speeds of 2330 kilometers per hour in 1973, Rumanian study, take-off performance of representative supersonic configurations	9591
	5300
	14855

	Entry
Airplanes—Continued	
U-10B limited category 2 performance tests	9975
USAF aerospace vehicles, information handbook	13625
V/STOL—	
tilting wing with 0.6-diameter chord	
Fowler flap, and single propeller rotating up at tip, aerodynamic data	7540
single-slotted flap, and single propeller rotating down at tip	18747
transport, 4-propeller tilt-wing, stability and control characteristics	20590
vibration analysis of AFFTC VTOL test stand	20948
VTOL—	
height-control requirements, piloted motion simulator, investigation	18777
interference effects of single and multiple round or slotted jets on model in transition	16697
transport model of vectored-thrust jet, flight tests	16681
unswept tilt wing of aspect ratio 5.5, with stall control devices, wind-tunnel tests	7530
VZ-2 VTOL, full scale wind-tunnel test with reference to wing stall phenomena	3014
wing-fuselage combinations, swept-back model, aerodynamic characteristics of spoller-slot-deflector control	1464
wing-tail-fuselage combinations, aerodynamic characteristics and boundary-layer transition, effects of distributed roughness height	13245
X-15—	
auxiliary power unit pinion gear wear and failure problem	20947
base pressure coefficients obtained for Mach numbers up to 6	18752
boost, piloting performance during high altitude	11412
flight informational sensors, display, and space control for atmospheric and nearspace flight missions	16712
flight pressure measurements on forward fuselage compared with wind-tunnel data and theory	5521
research at edge of space	7472
YLR99-RM-1 rocket engine operating experience	14899
YAT-28 E limited category 2 systems evaluation	16988
YAT-37D systems evaluation	13619
see also Seaplanes—Sonic boom.	
Airports:	
activity statistics of certificated route air carriers, 1830, 0059	15334
cargo facilities	17020
design	3246
design, construction, and maintenance, bibliography	6615
directory, airman's guide supplement	3424
Federal act, amend—	
hearing	8452
laws	8219, 13897
reports	381, 2074, 6297
Federal aid program, Federal aviation regulations	4682, 6621
field moisture content investigation	4671



# INDEX 1964

	Entry
<b>Airports—Continued</b>	
future supersonic transport aircraft and present airports, Rumanian study	2510
government-owned, under FAA, alteration of property under lease, etc., hearing	21206
grants-in-aid provisions, extend time—	
law	8219
reports	381, 2074, 6297
location identifiers handbook	3693
management, bibliography	6609
military airfields in theater of operations, soil stabilization requirements	2299
national airport plan, 1965-69	19194
National Capital, Federal aviation regulations, change	2307
planning, management and operations, safety, bibliography	17962
site selection, bibliography	6607
see also Air traffic—Pavements—also names of places where located.	
Airspace utilization, see Air traffic.	
Airway resistance, measurement with volume displacement body plethysmograph	17010
<b>Airways:</b>	
Alaska routes, certificated, map	1831
controlled airspace and reporting points, designation, Federal aviation regulations, change	21288
jet routes, establishment, Federal aviation regulation, changes	2305, 21289
route system, modification	15249
transportation system routes, maps	1832-34
<b>Airworthiness, see Airplanes—Engines (aircraft)—Propellers.</b>	
<b>Aitken, G.W.:</b>	
ground temperature observations—	
Big Delta, Alaska	17940
Galena, Alaska	17938
McGrath, Alaska	17939
Aitkin County, Minn., rural county cares for its aging	11171
Alu, Clarence L., and others, relief	21177
<b>Ajello, Joseph, probability of collision for momentum transfer of slow electrons in nitrogen plasma afterglow</b>	20526
<b>Akermanite, low-temperature heat capacities and entropies at 298.15° K</b>	5489
<b>Akron, Ohio:</b>	
buildings for Federal court and post office, survey, hearings	2122
occupational wage survey	18638
<b>Akvo, Salim, relief</b>	6259, 10390, 11998
<b>Alabama:</b>	
annual survey of manufactures, 1962, standard metropolitan areas and large industrial counties	6030
climatic summary, 1950-60, decennial census	15154
climatological data	3329
coal-bearing rocks, geology and coal resources	12508
coastal area, fishery products, wholesale dealers, list	18017
copper deposits, geology	800
electric rate book	4703, 12393
fishery products, wholesale dealers, list	717
forests	8698
labor organizations, reporting, register	16571
landings, fish and shellfish	3248
annual summary, 1963	12420

	Entry
<b>Alabama—Continued</b>	
Mississippi River and tributaries, fishery products, wholesale dealers, list	734, 18024
municipal waste facilities, 1962 inventory	3104
municipal water facilities	18909
pine pulp mill possibilities in northern section	16892
precipitation data, hourly	3578
western, pre-Selma cretaceous core samples from outcrop area	18107
women—	
labor laws, summary	13543
legal status	13539
workers, 1960	3194
Alabama (U.S.S.):	
Panama Canal, permit passage without toll changes—	
law	17279
reports	13977, 15703
Alameda, Calif., port	623
Alamo Band of Puertocito Indians, see Navajo Indians.	
Alarm systems:	
Federal item identification guides for supply cataloging	12293
supplements	3474
Intrusion alarm systems	9901
Alaska:	
agricultural land development, hearing	8354
air routes, certificated, map	1831
air transportation, certification and operations, civil air regulations amendment	10505
annual survey of manufactures, 1962, standard metropolitan statistical areas and large industrial counties, statistics	8104
centennial celebration, U.S. participation, appropriation, 1965, proposal	19533
centennial, 100th anniversary under American flag, recognize—	
law	19418
report	17515
certification and operations rules for certified route air carriers, civil air regulations, amendments	12367-370
climatic summary, 1922-52	5753
climatological data	3329
coastal warning facilities chart, 1963	5755
coastal warning facilities chart, 1964	11685
commercial fisheries, research and services	6702
construction grants, report	15556
earthquake grants, authorize—	
law	12006
reports	10280, 10404
earthquake insurance, provide, hearings	12267
earthquake, Mar. 27, 1964—	
postal service after earthquake (address)	15022
preliminary geologic evaluation, response to disaster	19703
earthquakes, Mar.-Apr. 1964, report, preliminary	11959
economics of milk marketing	19087
electric smelting of titaniferous iron ores	18681
fisheries, annual summary, 1962	8593
fishery problems, hearings	10330
forest fires	10590
geology of Chandler River region	804
geology of Kilik-Ikiliuk Rivers	19781
geology of Kilik-Etiviluk Rivers region	10636
ground-water, use of galleries for development of shallow supplies	18152

# JANUARY-DECEMBER

	Entry
Alaska—Continued	
Gubik formation of Quaternary age—	10635
income tax, withholding on compensation of Federal employees, regulations governing—	15140
Indians, tale of two totems—	2444
Jurassic ammonites from southern Alaska (series)—	18129
Kvichak River system, segregation of red salmon in escapements—	10573
labor organizations, reporting, register—	16574
Lost River tin mine area, geology—	8752
Matanuska formation, stratigraphic reconnaissance—	14339
migratory birds, Federal regulations governing hunting, etc., 1964-65—	15925
military departments method of shipping automobiles of Armed Forces personnel to and from Alaska, amend United States code—	
hearings—	13989, 17866
report—	13943
mineral resources (series)—	2414, 18101
municipal waste facilities, 1962 inventory—	3109
municipal water facilities—	18914
naval petroleum reserve no. 4 and adjacent areas exploration, 1944-53 (series)—	10635-636, 19781-782
northwestern, central Kobuk River Valley, surficial geology—	18111
Nushagak district, Bristol Bay, red salmon runs, statistics, etc.—	19737
ocean rate situation (remarks)—	21302
omnibus act, amend—	
hearing—	14140
laws—	12006, 17310
reports—	10280, 13953, 14067, 15556
principal electric facilities, map—	680
public works act, amend to authorize settlement of claims—	
law—	1958
report—	371
pelagic fur seal investigations, Alaska waters, 1962—	8622
reconstruction grants—	
hearing—	14140
law—	17310
reports—	13953, 14067
routes of U.S. air carriers, map—	1832
salaries of white-collar workers, May-June 1963—	7415
selection of mineral lands subject to lease, etc., amend statehood act—	
law—	8228
reports—	457, 632
snow surveys—	403
south-central—	
subsequent civil defense emergency operations—	15339
southeastern—	
Bokan Mountain uranium-thorium areas, geology and ore deposits—	6798
Sundum copper-zinc prospect—	18101
southern—	
cretaceous stratigraphy of McCarthy A-4 quadrangle—	18110
Upper Cretaceous (Campanian and Maestrichtian) ammonites—	6806
transitional grants, appropriations, 1965—	
law—	13904
reports—	8288, 8420, 13951
transportation of private vehicles of Govt. employees in Alaska—	
law—	6177
report—	4547
volume tables for trees—	2375

	Entry
Alaska—Continued	
waterborne commerce, 1963—	21281
waterfowl report, 1961—	2333
women, labor laws, summary—	20886
wood processing, 1961—	8695
Alaska Centennial Commission: United States to cooperate in centennial celebration—	
law—	19418
report—	17515
Alaska, Gulf of, scallop explorations—	14272
Alaska Railroad: employees, relief—	15639, 17488, 21108
encourage collective bargaining, etc.—	
hearing—	407
report—	2057
Alaska Reconstruction Office, establish, hearings—	12267
Alaskan Air Command, appropriations, 1965, military construction, hearings—	12118
Albacore, see Tuna fish.	
Albania:	
agricultural mechanization problems—	1154
press information reports—	1005, 1154, 2617, 4946, 5288, 7016, 7098, 7263, 8872, 8989, 9091, 9256, 10851, 10953, 11083, 11189, 12582, 12696, 12737, 12813, 12832, 14420, 14453, 16006, 16073, 16178, 16191, 16297, 16302, 16406, 18244, 18277, 18412, 18477, 18574, 20037, 20040, 20066, 20182, 20382, 21545, 21645.
Albany, N.Y.:	
Federal paperwork jungle, hearing—	12150
occupational wage survey—	14695
water resources—	4800
Albany Metallurgy Research Center: cobalt 60 facility, high-level gamma ray dosimetry—	14747
metallurgical progress reports—	1782, 8088, 13719, 17064
Albedo, charged, edge of polar plateau for galactic cosmic rays—	9509
Albers, John P., geology of French Gulch quadrangle, Shasta and Trinity Counties, Calif.—	8754
Albersson, David M., roller ginning American-Egyptian cotton in Southwest—	4104
Alberta, Canada, snow survey and soil moisture measurements—	18950
Albin, Donald R., geology and groundwater resources of Bradley, Calhoun and Ouachita Counties, Ark.—	12528
Albuquerque, N. Mex., occupational wage survey—	16594
Alcatraz Island, Commission on Disposition of: report, extend time—	
law—	1955
reports—	2049, 2208
Alcohol:	
and hypoxia effects on heterophylls—	7997
and traffic safety—	5552
denatured, distribution and use, code of Federal regulations—	12549
education in institutions of higher learning—	13280
industries, 1963, statistics—	4832
Alcohol and Tobacco Tax Division, see Internal Revenue Service.	
Alcoholism:	
Health, Education, and Welfare Department's role in programs (paper)—	20769



# INDEX 1964

Entry	Entry
Alcoholism—Continued	Aliens—Continued
preventive approach through programs of Welfare Administration	deportation suspension
selected bibliography	employment in scientific or technical capacity—
Alcoholism Programs, North American Association, <i>see</i> North American Association of Alcoholism Programs.	law
Alder, Nepal alder grown in Hawaii, physical and mechanical properties, limited evaluation	reports
Aldolase, activity of brain and muscle tissue of rats, effect of fractional X-ray irradiation, USSR study	enlistment in Reserve components of Armed Forces, amend U.S. code—
Aldrich, R. C., two plot transfer devices developed for aerial photographic forest insect trend surveys	hearing
Alert (series)	law
Alewives, firms canning, list	reports
Alexander, George J., civil rights, U.S.A., public schools, cities in North and West, 1963, Buffalo	foreign and visiting educators from abroad, welcoming suggestions for schools and communities
Alexander, Robert, claim	medical examination program of Public Health Service, study
Alexander, Vida O., official opinions of Attorneys General	relief
Alexander County, Ill., development program, suggestions for making more effective	<i>see also</i> Immigration and emigration
Alfalfa:	metals:
lime response, toxic factors in acid soils of southeastern U.S.	atoms on tungsten—
pea aphids, how to control	adoption of Leonard-Jones atom-atom interaction theory to adsorption
relative performances of varieties, variety crosses, and variety mixtures	atom-metal interaction theories, application to adsorption
two-clone crosses, performance and self-pollination problem	vapors flowing through nozzles, expansion and condensation behavior
Alford, Albert L., nonproperty taxation for schools, possibilities for local application	Alkalies, sulfonates, solubility
Algae:	Alkaline leaching, <i>see</i> Leaching.
biochemical investigation, USSR study	Alkalinity, <i>see</i> Water.
culture unit, oxygen production, factors affecting	Alkaloids, <i>see</i> Pachycarpine.
cystosira in Black Sea, variation in content of fission products, USSR study	Alkylthiophenes, mass spectra and correlations
Eocene, from Ishigaki-shima, Ryukyu-rettu	All Hands, Naval Personnel Bureau career publication
evaluation of marine algal flagellates for mass culture	All-Union:
feasibility for oxygen production for nuclear submarines	NOTE.—For headings beginning All-Union, <i>see</i> Union of Soviet Socialist Republics.
fossil and recent, Guam	Allan, Philip F.,
Soviet survey	autumn olive for wildlife and other conservation uses
Algas Industries, Los Angeles, Calif., raising of President Johnson's E pennant (remarks)	how to plan shooting field in Northeast and Corn Belt
Algebra, Boolean algebra	Allbright, Charles S., use of tritium tracer technique in studies of gasoline storage stability
Algebraic structure of N-body problem	Allegheny Parkway, development
Algeria:	Allegheny Portage Railroad National Historic Site:
educational data	establish—
ministries appropriations, 1964	law
Saharan region, information	reports
scientific cooperation with USSR	Allen, Donald M., shrimp farming
Socialism under Ben Bella, contrasted with Egyptian	Allen, Dorothy S., interior decoration for Veterans' Administration hospitals
Algology, Fott's textbook, USSR study	Allen, H. Julian:
Algorithms, <i>see</i> Mathematics.	aerodynamic heating—
Alciverille lock and dam, naming, hearings	conical entry vehicles
Allen enemy property, <i>see</i> Enemy property.	results from analysis of meteor flight data
Aliens:	Allen, J. W., lightweight transoceanic system
admission into U.S. for temporary employment, study	Allen, Kevin J., new whiteline products tested at University of Massachusetts annual school-lunch conference
code of Federal regulations	Allen, Margaret F., statistical considerations for clinical studies of dental caries
commuter workers, study	Allen, R. S., radio star scintillation over Canada during July 20, 1963 eclipse
	Allen, Robert L., consultation with staff of Un-American Activities Committee, print additional copies, report

# JANUARY-DECEMBER

	Entry		Entry
Allen, W. K., traveling wave tube re-entrant amplifier serrodyne system	14846	Alluviums—Continued	
Allen County, Kans., in situ combination project and 3 waterflood projects, 1964	20480	lateral turbulent diffusion at surface of alluvial channel	18124
Allensworth, Don T., public open-space programs and activities, National Capital region	7583	sediment transport in alluvial channels (series)	811, 6808, 10646, 18136
Allentown, Pa., occupational wage survey	13068	stability of crater slopes, Project Sedan	122
Allergy, Soviet studies	18569	studies of flow in alluvial channels (series)	4799, 10648
Allers, Wilmer, and wife, property rights, release of United States interests	12044, 15645, 17204	Almanacs:	
Alliance for Progress, see Latin America.		air, 1964	1518, 9667
Allingham, John W., geology of Dodgeville and Mineral Point quadrangles, Wis.	797	supplement	3070
Allison, Don, chronic effects of DDT on cutthroat trout	10570	air, 1965	16772
Allison, Lewis J., TIROS II radiation data recorded over New Zealand at night	7494	see also Nautical almanac.	
Allocation, optimum computerized system development for Army enlisted personnel	13687	Alnus nepalensis, see Alder.	
Alloplasty, resection of liver, USSR study	10063	Alouette satellite, see Satellites.	
Allowances, see Cost of living allowances.		Alpha particles:	
Alloys:		energy loss of 5.8 Mev particles passing through absorber of variable thickness	8065
and metals, corrosion, USSR studies	2659	40-Mev, visible radiation damage effects on sodium chloride crystals	13243
carbide hard, product of powder metallurgy	4914	Altimeters, lag in aircraft altitude measuring systems	4233
casing, for high-precision parts, USSR investigation	16069	Altitude:	
cryogenic applications, review	11809	effects on resistance of mice to infection with Klebsiella pneumoniae	11807
dislocations, interaction with 2d phase particles, USSR study	2839	high—	
heat resisting—		acclimatization, relationship of age and work performance	13735
casting properties, USSR study	12926	nuclear explosions, effects of test	20588
research, USSR studies	5095, 12802	transient changes in arterial lactic acid of dogs	9986
high temperature—		national rocket test facilities	14833
casting, production, and refining, USSR studies	2704	tolerance, thyroidal influence	5908
fatigue and oxidation, USSR study	12783	variation of Rayleigh, aerosol, and ozone attenuating components in ultraviolet regions	19149
investment casting, USSR studies	2543	Altitude controller, tester, model VT-T-10G, instrument calibration procedure, technical manual	16804
metallurgy, USSR studies	12718	Altmeyer, Arthur J., social welfare in U.S.	20801
nickel-base, M 252, effect of heat treatment on mechanical properties, USSR studies	14419	Altoona, Pa., area redevelopment manpower report	21275
nonferrous, production and treatment, USSR study	20318	Alumina:	
rare earth elements with transition elements, characteristics	19233	balls, surface failure due to repeated stresses applied in rolling contact at temperatures to 2000° F	13227
rare earth, USSR book	8049	dispersion-hardened nickel alloys, electrodeposition	7065
refractory, high temperature properties	5971	hydrate and dilute fluoride solutions, used in preparation of aluminum fluoride	20500
solid state diffusion	11854	imported for use in producing aluminum, suspension of duty—	
superalloys—		law	13910
fatigue-crack propagation	20587	reports	8315, 12243
progress	20617	production from clay, nitric acid process	11337
use in supersonic transport, mechanical properties	18718	X-ray diffraction and optical microscopic data on phases in binary systems CaO-Al <sub>2</sub> O <sub>3</sub> , CaO-SiO <sub>2</sub> , and Na <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub>	11334
superconducting, physics, USSR study	20391	see also Sapphire—Rubies.	
superheated steam environments, relative performance	10030	Aluminates, X-ray diffraction and microscopic data	11334
thermomechanical treatment and strengthening, USSR study	12809	see also Calcium aluminates—Sodium aluminate.	
titanium, hot stamping of blanks, USSR study	20218	Aluminum:	
welding, ceramic flux use	20167	alloys—	
see names of metals, etc.		deterioration in presence of mercury and cesium	7470
Allport, Henry H., relief	6422	fatigue life, effects of combined prior stress and atmospheric corrosion	16088
Alluviums:		modification, USSR studies	12584
Arkansas River between Little Rock and Fort Smith, Ark., groundwater potential	823	plate or sheet, upsetting butt edge	
geomorphology of segmented fans in Fresno County, Calif.	10637	increases weld-joint strength	20560

# INDEX 1964

Entry	Entry
Aluminum—Continued	
alloys—continued	
USSR study	16320
wrought products, tolerances	4724
cellular material for use in energy dissipation system	18719
cryogenic electromagnets, electrical properties	18807
effects of Al and Ti, etc., on mechanical properties of nimonic 80A, Japanese study	12962
extraction characteristics of calcium aluminates in water, sodium hydroxide, and sodium carbonate solutions	20504
factbook, BLSA Industry growth study	6000
finish, high temperature non-reflective erosion resistant	18869
fluxes and their use in soldering, literature research	8070
high-purity, obtaining by zone recrystallization, USSR study	11079
industries, USSR activities	2656
ingot and mill products, current industrial reports	3390, 19290
ingot shipments, Jan. 1962–June 1963	160
intermetallic compounds in magnesium-rich alloys	18682
minerals yearbook chapter	20465
nickel alloys, friction and wear in vacuum	13235
oxide-copper alloy, production proportions, USSR study	18303
powder, sintered—	
collection of Soviet works	2587
heat-resistant material	
weldability by fusion, USSR study	20322
SAP-2, brazing, USSR study	10975
sheet, stamping problems, USSR study	21491
spot welding with DIGAT and AMG6 alloys, USSR study	2790, 3934
primary, monthly report	
products, preparation for shipment and storage, military standard	562
scrap and secondary ingot, mineral industry survey, monthly	4014
sintered and commercial, creep-rupture properties, effect of vacuum	5600
slab, nuclear collision density of primary galactic protons, Monte Carlo calculation	9571
vectorial reflectance of Explorer IX satellite material	16701
see also names of articles manufactured from aluminum.	
Aluminum alloy castings, see Castings.	
Aluminum carbide, heat of formation.	11322
Aluminum Company of America, weapons components procured for AEC by Aluminum Co. of America and ACF Industries, Inc., cost and pricing data not obtained for determining reasonableness of prices, GAO report	21332
Aluminum fluoride, preparation from alumina hydrate and dilute fluoride solutions	20500
Aluminum foil, converted, 1963, current industrial reports	13750
Alva L. (ship):	
documentation with full coastwise privileges, report	17719
Alvord, Ray W., project M, data development and analyses in support of officer management	19164
Amado, Julian B., relief	6382
Amado, Manuel S., relief	6382
Amalgams, electrolysis, for cadmium refining	7434
Amazon River, investigations, reconnaissance measurements of July 1963	6801
Ambassadors, American ambassador, role in national security, study	14138
Ambler River, glacial, eolian, and alluvial history of parts of quadrangle, reconnaissance study	18111
Ambre, Ago, occupational outlook quarterly	3809
Ambrose, Paul M.:	
abrasive materials	20464
fluorspar and cryolite	20473
fluorspar in 1963, preliminary report	5471
fluorspar production, 1963	16623
AMC. see Army Materiel Command.	
Amelias:	
laboratory diagnosis, self-instructional course—	
Entamoeba histolytica, life cycle	20740
intestinal amebae, identification	20741
introduction	20739
laboratory procedures	20742
America:	
America as a great power	11620
metropolitan America, bibliography	19599
rare sea mammals	14274
space, pictorial review	16657
see also Latin America.—North America—South America—United States.	
America Illustrated (periodical):	
Polish language	3251
Russian language	3252
American Academy of Actuaries, incorporate, report	17756
American Association of State Highway Officials Joint AASHO-NACO Committee 2d progress report	13429
American Astronomical Society, symposium on physics of solar flares	20537
American Battle/Monuments Commission:	
appropriations, 1964—	
hearings	515
law	1974
report	511
appropriations, 1965—	
hearings	10288
law	17386
reports	10245, 21193, 21233
American Ceramic Society Symposium, microstructure of ceramic materials, proceedings	11431
American Chrome Co., mining methods and costs in operating Mount mines	5475
American Commission for Cultural Exchange with Italy, experiment in international understanding, close up of educational exchange program	11616
American Committee on Voluntary Foreign Aid, reports of registered agencies	18188
American Cyanamid Co., motor vehicle accident	21377
American ephemeris and nautical almanac, 1966	18835
American Ethnology Bureau:	
bulletins 4272-73, 9992, 11813-814	
bulletins 1-100, etc., index—	
departmental edition	4272
document edition	4427
American Federation of Labor and Congress of Industrial Organizations:	
agreement with Post Office Department	15025
resolutions, national and State civil defense policy	19326

# JANUARY-DECEMBER

	Entry		Entry
American Food for Peace Council, conference proceedings-----	3146	American Veterans of World War II: legislative objectives, 1964, hearings-----	10347
American Heart Month: designate-----	1981	proceedings, print as House document-----	1953
law-----	2061	law-----	2031, 2203
report-----	11815	American Viscose Corp., wage chronology, 1945-63-----	21669
American Historical Association: report, 1958-----	12017	Americans, living overseas, ethnic origin, education, occupation, and other social and economic data, census of population, 1960-----	19308
departmental edition-----	17865	Ames trapezoid illusion, see Distortion.	
document edition-----	17865	AMG, see Acreage marketing guides.	
American history, see History.		Amharic language, Foreign Service Institute, basic course-----	15094
American horological industry-----	17865	Amherst County, Va.: nelsonite deposits-----	11335
American Indians, see Indians.		titanium resources-----	11335
American Instructors of the Deaf, Convention of, see Convention of American Instructors of the Deaf.		Amides, see Polyamides.	
American labor movement-----	20435	Amines, polyethoxylated, as flotation collectors for slimed lead minerals-----	9509
American Legion: convention, 1963, proceedings-----	8244	Amino acids: aromatic, biosynthesis stimulation of chlortetracycline by antagonists, USSR study-----	9018
legislative objectives, 1964, hearings-----	10347	biophysical studies, USSR-----	9320
School Award Medal, patent renewal-----	17256	electron paramagnetic resonance spectra under gamma radiation and light, USSR study-----	9257
law-----	15616	imbalance in cold exposed rats, metabolic studies-----	4249
reports-----	10203, 15616	Amino compounds, labile, spectrophotometric determination in fresh and seawater by oxidation to nitrite-----	13347
School Award Plaque, patent renewal-----	17255	Aminoethylisothiuronium, AETH, used with dopane, reduced toxicity in experiments on monkeys, USSR study-----	7344
law-----	10204, 15617	Amistad Dam: market power generated-----	1966
American literature, classification, Library of Congress-----	18650	law-----	493
American Museum of Immigration, see Statue of Liberty National Monument American Museum of Immigration.		report-----	1966
American National Red Cross, land conveyance in Prince Georges County, Md., to, law-----	259	Rio Grande, Mexico and United States, spillway, hydraulic model investigation-----	19662
American nationals: claims against Poland, settlement, agreement-----	8630	Ammeters: AC-DC standard volt-amp-milliammeter sensitive research model THACH, instrument calibration procedure, technical manual-----	11510
repatriates, temporary assistance, extend-----	13896	thermo-millammeter instruments, 1.0 to 1000 MA full scale, instrument calibration procedure, technical manual-----	11508
law-----	12240	Ammonia: distribution in soil and its effect on plant growth-----	12733
reports-----	8345	sales operations of Billie Sol Estes spectrophotometric determination in fresh and seawater by oxidation to nitrite-----	13347
American Nuclear Society, topical meeting-----	8077	Ammonites: Haresiceras, cephalopod, possible origin-----	8770
American policy, see International relations.		Jurassic ammonites from southern Alaska (series)-----	18129
American Ranger (S.S.): launching (remarks)-----	19356	middle Bajocian, from Cook Inlet region, Alaska-----	18129
American republics: foreign relations of U.S., diplomatic papers, 1941-----	3143	trachyscapites, means for correlation of strata between U.S. and Europe-----	18138
departmental edition-----	1989	upper Cretaceous (Campanian and Maestrichtian) from southern Alaska-----	6806
document edition-----	1598	Ammonium carbonates, ammoniacal leaching of manganiferous materials from southern district, Aroostook County, Maine-----	7446
Inter-American series-----	9798, 11621, 18957, 20820		
research studies completed, list-----	7757		
research studies in progress, list-----	9793		
social science research studies in progress, list-----	20817		
American River division, see Central Valley project.			
American Samoa: labor organizations, reporting, register-----	16574		
plant import requirements-----	15201		
public school finance program, 1962-63-----	4634		
submerged lands, place jurisdiction within, law-----	263		
American social and economic revolution, for whose benefit?-----	18607		
American social workers abroad-----	11710		
American Society for Testing and Materials, coke testing methods, correlation with Micum test-----	16633		
American Standards Association: national plumbing code, proposed revision-----	9725		
safety rules for installing and using electrical equipment in coal mines-----	20476		



# INDEX 1964

	Entry
Ammonium perchlorate, increased costs, purchased for solid-propellant missile motors, GAO report	6769
Ammunition:	
artillery, manufacture of metallic compounds	17035
engineering design handbook series	19202
Federal item identification guides for supply cataloging	12297
supplements	3478
furnishing for test-firing M14 rifles, unnecessary costs, Army Dept., GAO report	8736
loading terminals	14206
plastic gears, feasibility memorandum	17897
Amoebae:	
intestinal, identification, self-instructional lesson	20741
USSR biological studies	16409
Amphibians, Okefenokee National Wildlife Refuge, list	19733
see also Cargo carriers.	
Amphibious operations:	
amphibious reconnaissance, Fleet Marine Force manual	11309
ROTC cruise manual	13318
Amphipods, west coast of North America, new and unusual species	7607
Amplan, Sarkis G., X-ray diffraction and optical microscopic data on phases in binary systems, etc.	11334
Amplifiers:	
a.c. low level, adjustable noise cancellation and automatic temperature compensation	9542
detuning cavity amplifiers with change in temperature, nylon sleeve design	13166
electronic control, test set, instrument calibration procedure, technical manual	16803
electronic fundamentals	20686
hydraulic power, operation	81
instantaneously-responding expansion, method and device for signal enhancement in noise communication systems	16994
microminiature, with thin-film passive parts	13371
microwave parametric amplification	5620
molecular group, design	7959
paramagnetic, for planetary radar, USSR study	7244
reversible operational, USSR study	4921
travelling wave tube re-entrant serrodyne system	14846
tunnel diode, model EK/A-8, etc.	13618
varactor diode parametric, for Rawlin set AN/GMD-2, evaluation	65
see also Fluid amplifiers.	
AMRA, see Army Materials Research Agency.	
AMRL, see Aerospace Medical Research Laboratories.	
AMS, see Agricultural Marketing Service—Applied mathematics series.	
Amundson, Peggy S., legal status of women, California	1662
Amusements, expenses, rules for deducting from income tax	2448
see also Performing arts.	
AMVETS, see American Veterans of World War II.	
Amyotrophic lateral sclerosis:	
hereditary, intracellular intrusions, USSR study	9297
USSR study	16056
An Fu Wang Lee, see Lee, An Fu Wang.	

	Entry
Anabiosis, see Cryptobiosis.	
Anadromous fishes, see Fish and fisheries.	
Analeptics, see Medicine.	
Analog computers, see Electronic computers.	
Analog studies, electric model and ground water system	18119
Analysis, see Radiochemical analysis—also names of substances analyzed.	
Analysis and Purification Section, National Bureau of Standards, services	11429
Analysts, see Financial analysts—Research analysts.	
Analytical chemistry, see Chemistry.	
Analytical methods in geochemical investigations of Pierre shale (series)	18127
Analytical quality control service of Division of Radiological Health, interlaboratory study of iodine 131 surveillance measurements in milk	20743
Analyzers:	
automatic GSR analyzer	5898
cutaneous and motor analyzers in cats, comparative chemorheotronics of functional groups of proteins in cortical nuclei, USSR study	12923
digital tape recorder analyzer	21748
distortion, Hewlett Packard 830B or 1101-830D, instrument calibration procedure, technical manual	13362
interplanetary plasma	7520
man's visual and auditory, factors affecting, Soviet research	5049
see also Gas analyzers—Optical analyzers.	
Anaphylaxis, active and passive in worms	9010
Anaplasmosis, costly disease of cattle	11740
Anatomy:	
body organs, transplantation	21541
effects of microorganisms on human body, USSR study	18547
human, theoretical, fundamentals, USSR study	20017
pathological, acute radiation sickness in experiment, atlas	4291
Anchorage, Alaska:	
consumer expenditures and income, 1959	2951
geology and ground-water resources of area	15964
hydrology and effects of increased ground-water pumping in area	15965
principal electric facilities, map	680
Anchovies, firms canning, list	753
Ancient Arabic Order of Nobles of Mystic Shrine:	
regulations for 1965 convention—law	17245
reports	6324, 14107
Andalusite, high-temperature heat contents and entropies	7448
Anderson, Alice V., orientating parents to clinic for retarded	11919
Anderson, Bernhard H., behavior of confined fluid subjected to non-uniform source and wall heating	1476
Anderson, Carl L., alcoholism, selected bibliography	14946
Anderson, D. E., physics of electron emission, etc.	7995
Anderson, Donald R., late efforts of chronic irradiation on longevity, etc.	73

# JANUARY-DECEMBER

Entry	Entry
Anderson, Floyd G., dust-control methods for continuous mining of coal.....	2982
Anderson, Hal E., mechanisms of fire spread.....	12474
Anderson, Henry W., managing California's snow zone lands for water.....	8688
Anderson, L. O.: performance of sandwich panels in FPL experimental unit.....	18080
wood crate design manual.....	5816
Anderson, Nell A., white pine root rot at Chittenden Nursery.....	773
Anderson, Peter W., variations in chemical character of Susquehanna River at Harrisburg, Pa.....	828
Anderson, R. B., kinetics of Fischer-Tropsch synthesis on iron catalysts.....	13103
Anderson, R. V., measurements of atmospheric electric conductivity and field in Shenandoah National Park, Va.....	5612
Anderson, Ralph E., wiped film evaporator, economic and technical, evaluation.....	19815
Anderson, Richard J., one-trial learning and quantum psychophysics, synthesis.....	15006
Anderson, Robert J., paper, Dec. 3, 1963.....	7692
Anderson, Rodney D.: foreign trade regulations of—	
Bolivia.....	4858
Costa Rica.....	6848
Guatemala.....	14374
Nicaragua.....	14384
Anderson County, Kans., in situ combustion project and 3 water-flood projects, 1964.....	20480
Andreasen, Gordon E., geologic interpretation of magnetic and gravity data in Copper River Basin, Alaska.....	21352
Andrew Johnson National Historic Site:	
change name from Andrew Johnson National Monument—	
law.....	1926
report.....	4434
Andrew Johnson National Monument: change name to Andrew Johnson National Historic Site—	
law.....	1926
report.....	4434
Andrews, David H., Latin America, paperback books, bibliography.....	13090
Andrews, Robert S., validation of experimental electronics selection battery.....	21008
Andrillenas, Paul A., economic aspects of specific pathogen free hog production.....	8469
Anemometers, new, fast response, measures dynamic pressure directly.....	20543
Anesthesia, see Anesthetics.	
Anesthesiology:	
antihistaminic drugs effectiveness, USSR study.....	1312
Soviet, published literature, 1963-65, survey.....	7293
USSR symposium, transactions.....	913
Anesthetics:	
current problems in anesthesia, USSR.....	19869
dental patient with heart disease, anesthesia.....	11549
theory of anesthesia, USSR study.....	16471
USSR studies.....	1015, 1167
Angelillo, Claire, relief.....	19542
Angina pectoris, see Heart diseases.	
Angino, Ernest E., thermoluminescence, bibliography.....	1773
Angle of attack:	
convergence of spinning bodies entering planetary atmospheres at large inclinations to flight path.....	21777
flow fields about cylinders at zero angle of attack, parametric study.....	14875
Ranger IV, steady-state characteristics of differential-pressure system for evaluating.....	1457
small, supersonic flow around right circular cones.....	14796
Angle of side-slip, Ranger IV, steady-state characteristics of differential-pressure system of evaluating.....	1457
Angles, setting on machine tools speeded by magnetic protractor.....	13160
Anglin, Erie L., aircraft-developed spins, etc.....	7541
Angola, statutes, program, and memorandum to OAU summit conference.....	20062
Angolese National Liberation Front, activities.....	14552
Animal glue, see Glue.	
Animal husbandmen, public health scientist, examination announcement.....	209
Animal husbandry, see Animals.	
Animal industry, see Livestock.	
Animal products, code of Federal regulations.....	6659
Animals:	
acclimatization, all-Union conference.....	2492
Animal Quarantine Station, Clifton, N.J., relocation—	
hearings.....	6336
law.....	19400
reports.....	10242, 17768
animals and hybrids, radiosensitivity, USSR study.....	12760
cells, metabolic control mechanisms.....	13284
cells, USSR studies.....	7201
code of Federal regulations.....	6659
compensatory hypertrophy of organs of mammalian animals.....	8999
enzymes, USSR study.....	19992
exposed to radiation, micronecrotic foci of hemopoietic organs, USSR study.....	5229
health, guardians, veterinarian and FDA.....	14286
husbandry—	
Communist China, translations.....	911, 985, 1108, 1184, 1225, 1340, 2571, 2594, 2609, 2684, 2799, 2926, 4940, 4989, 5057, 5243, 5264, 5390, 6919, 6932, 7036, 7081, 7106, 8940, 9183, 10798, 10951, 11061, 12650, 12822, 18017, 14656.
radioisotopes uses, bibliography.....	15283
Rumania, scientific research.....	14556
laboratory, normal spatial vectorcardiogram and methods for its recording, USSR study.....	16277
live, Federal item identification guides for supply cataloging.....	12296
supplements.....	3477
longleaf seed losses to animals on burned seedbeds.....	18075
mechanisms continue to puzzle engineers, USSR study.....	2643
organs, evolution and adaptation, USSR studies.....	21415
physiological reactions during flights of spaceship-satellites, USSR study.....	21481

# INDEX 1964

	Entry		Entry
Animals—Continued		Antarctic regions:	
physiology, USSR studies	21477	climatological data for Antarctic	
restraints, technique for making	20545	stations	5754, 13519
systems, problems in bionics, USSR		north of Novolazarevskaya sta-	
study	16443	tion, results of geophysical	
wild, free importation—		studies of earth's crusted struc-	
law	17341	ture, USSR	6883
reports	14098, 15544, 21194	problems (USSR periodical), trans-	
see also Diseases of animals—Ma-		lations	5388
rine fauna.		seismological bulletin	3256
An'on exchange resins, see Resins.		U.S. Antarctic Projects Officer,	
Anionic flotation of silica from west-		bulletin	3285
ern Mesabi and Menominee		United States policy and inter-	
Range iron ores	9516	national cooperation in Ant-	
Anisotropic effects in helically wound		arctica	19447
superconducting solenoids	3031	Willett Range coal deposits, Vic-	
Anisotropy:		toria Land, Antarctica	2995
constant of nickel, dependence to		see also South Pole.	
temperature and saturation		Antelope, Oreg., geologic reconnais-	
magnetization, USSR study	930	sance of area	4778
cosmic ray	18746	Antenna horns, reduces side lobes,	
magneto-crystalline, ferrimagnetic		improves radiation pattern	11372
resonance relations in cubic		Antennariidae, see Frogfishes.	
crystals	15243	Antennas:	
mode sum for IF, VLF, ELF ter-		accurate pointing from predicted	
restrial radio wave fields	20639	satellite positions, interpola-	
optical, and conformation of mole-		tion and coordinate trans-	
cules of soluble (transfer)		formation program	13218
ribonucleic acid S-RNA, USSR		broadband linear array for space	
study	12801	surveillance	16800
plasma, semi-infinite, transient re-		circular arrays with typical ele-	
flexion and transmission of		ment patterns, computations	21753
plane wave	19170	dipole, curves of input impedance	
potential advantages of anisotropic		change due to ground	5546
superconductors in force-		directive VLF, for reception of	
free solenoids	21757	transpolar series from contin-	
spin-wave, in parallel pumping ex-		tinental U.S.	19106
periments on YIG	9970	directivity of H.F. and V.H.F.	
Ann Arbor, Mich.:		systems, determining balloon	
District Court, eastern district,		technique	5504
term to be held for southern		Dolph-Tchebyscheff arrays of many	
division		elements and arbitrary uni-	
law	21119	form spacing	19168
reports	15553, 17857	double-helix, and variants, tunable	
research and field laboratory for		endfire antennas	7960
water pollution control	11573	microwave, subreflector flange cuts	
ANNA, see Satellites.		ground noise	13168
Annapolis, Md., see Naval Academy,		mutual coherence and array theo-	
Annapolis.		rem	9972
Annett, J., use of euling in training		pattern distortion due to plasma	
tasks	13323	layer, experimental determina-	
Annette Island, aircraft accident	10087	tion	9971
Annuities:		pattern distortion, plasma pro-	
Foreign Service retirement, and		duced	17008
disability system, adjust-		satellite tracking characteristics of	
ments		X-Y mount for data acqui-	
hearings	10311	sition	13213
reports	2226, 13968, 19465	slotted-cylinder, equatorial pat-	
Supreme Court Justices' widows,		terns in plasma environment	7544
increase, reports	15507, 17540	structures, construction, lighting,	
uniformed services contingency		and marking, FCC rules and	
option act, amend, report	17847	regulations	3987, 6024
see also Civil service pensions—		Anthems, National, see National	
Pensions.		songs.	
Annulment of marriage, see Mar-		Anthracite, see Coal.	
riage.		Anthracite mines, see Coal mines and	
Anomalies:		mining—Mine drainage.	
gravity, basis for calculation of		Anthracnose, walnut, identification	
plumb-line deflections, USSR		and control	14299
study	902	Anthrax, human cases, USSR study	1176
magnetic—		Anthropologists, employment out-	
economic significance in south-		look	9409
eastern Minnesota	8762	Anthropology:	
transition region from Asiatic		anthropological papers—	
Continent to Pacific Ocean,		departmental edition	4273
USSR study	969	document edition	4428
Anorthosite and associated rocks in		USSR studies	11104
Boehls Butte quadrangle and		Anthropometry, bibliography	9851
vicinity, Idaho	805	Antiaircraft missiles, see Missiles.	
ANS, see American Nuclear Society.		Anti-atherogenic action of cortisone	
Ansley Wilcox House, acquire and		and methylandrostenol in ex-	
preserve as historic site, re-		perimental atherosclerosis in	
port	2095	rabbits, USSR	12730

	Entry
Antibiotics:	
anticancerous, USSR study-----	7301
drugs, regulations, assay and certification tests-----	18034
amendments-----	18035
failure of therapy of autoinfection in radiation sickness-----	4939
testimony, hearings-----	8445
USSR-----	
research-----	19835
studies-----	1056
see also Penicillin-Streptomycin.	
Antibodies, see Antigens and antibodies.	
Anticholinergic substances, hallucinogens, psychopathology and biochemistry of psychoses produced, Czechoslovak study-----	7072
Anticoagulants, dental surgery during anticoagulant therapy-----	5650
Antifungal action of synthetic fibers containing specific chemical groups, USSR-----	992
Antigens and antibodies:	
antibody formation in chicks following immunization with antigen from <i>Ascaridia galli</i> , effect of vitamin A, USSR study-----	8924
biosynthesis of antibodies induced by ribonucleic acid from lymphatic nodes and spleen of immune rabbits, USSR study-----	9114
control mechanisms for antibody formation in light of data on genetics of immunity, etc-----	9006
depression of antibody production after gamma-irradiation in high doses, USSR study-----	2489
rare, weak A antigens, A <sub>1</sub> , A <sub>2</sub> , A <sub>3</sub> , and A <sub>4</sub> , in man-----	21011
tumor cell membrane, USSR study-----	10801
Antigua, labor organizations, directory-----	21376
Antihistaminic drugs, effectiveness in anesthesiology, USSR study-----	1312
Antilles:	
Lesser, sailing directions-----	7629
light list-----	6112
waterborne commerce, 1963-----	17958
Antimony:	
disposal from national stockpile-----	
hearing-----	17636
law-----	19423
reports-----	17528
minerals yearbook chapter-----	20466
primary, mineral industry survey, quarterly-----	3257
Antimycin A, toxicity of fish and other aquatic animals-----	19721
Antipodal image of electromagnetic source-----	13640
Antiques, imports exceeding 100 years of age, provide duty-free entry, report-----	8306
Antiseptics, biologically active polyvinyl alcohol letlan fibers, USSR study-----	8883
Antitank guided missile (ENTAC), Army field manual-----	11836
Antitrust laws, see Monopolies-Trusts (Industrial).	
Antlers, biological activeness of preparations made from stag antlers, USSR study-----	10968
Ants, fire, imported, eradication program and progress-----	7897
Aorta, abnormal, intubation, of Alaskan ground squirrel-----	7987
Apanasewicz, Nellie, Soviet education, bibliography-----	17923
Apltn, Ransom C., relief-----	317, 6436, 8206
Aplite, minerals yearbook chapter-----	18664

	Entry
Appalachian Development Corporation:	
create-----	
analysis of bill-----	21213
hearings-----	14015, 15818
Appalachian region:	
Appalachia-----	
program in relation to ARA program (address)-----	11819
report of President's commission-----	9699
development act of 1964-----	
hearings-----	14015, 15818
reports-----	15532, 17607, 17728
section-by-section analysis-----	21213
development, challenge for college graduates (address)-----	11965
economic conditions of area (remarks)-----	13827
housing, quality, rural and urban areas-----	10454
living cull trees, what happens after heavy cutting in mixed hardwood stands?-----	8648
public assistance problems in area (remarks)-----	6832
southern-----	
rainfall interception by hardwood forest litter-----	14332
yellow-poplar cubic-foot volume tables-----	8669
wood-using industries, location decision-----	8680
Appalachian Regional Commission:	
appropriation, 1965, proposal-----	19534
establish-----	
analysis of bill-----	21213
hearings-----	14015, 15818
reports-----	15532, 17607, 17728
Appalachian Trail, general information-----	4216
Apparatus and techniques for measuring bedload-----	19797
Apparel, see Clothing.	
Appeal procedures, see Government officials and employees.	
Apple cider, see Cider.	
Apples:	
apples in appealing ways-----	11763
bitter rot, general information-----	1703
commercial, production by varieties, 1963 with comparisons-----	1623
market your fresh apples-----	20928
marketing, review of economic research, 1945-60-----	2262
orchards, young, establishing and managing-----	15208
packing and storage houses, layout and design-----	4207
Red Delicious, how color affects their sales-----	4208
Starking and Golden Delicious, oxygen and carbon dioxide levels for controlled-atmosphere storage-----	9949
Appliances, see Electric apparatus and appliances.	
Application of data smoothing by analog computer-----	1681
Applied mathematics series-----	13267
Appointments, see names of persons appointed.	
Appraisal, see Valuation.	
Appraisers:	
right-of-way, examination announcement-----	4393
discontinuance notice-----	1843
Apprentices:	
apprenticeship-----	
and economic change-----	4274
apprenticeship and training representative, examination announcement-----	13807
apprenticeship and unemployment-----	11816



# INDEX 1964

	Entry		Entry
Apprentices—Continued		Approximations, calculation of hyper-	
apprenticeship—continued		sonic conical flow parameters	
national program-----	5922	for air in thermodynamic cal-	7504
conference observing 25th anni-		culation-----	
versary, highlights-----	86	Apricots, production, use, value, by	
national standards-----		States, 1962-63-----	15129
operating engineers, 1963-----	5923	APRO, <i>see</i> Army Personnel Research	
painting and decorating-----	20978	Office.	
sign, pictorial display, electric		Aptitude tests:	
sign and process industry-----	5921	Air Force, AQE indexes, normative	
role in manpower development,		distributions for high-school-	
United States and Western Eu-		age boys-----	19162
rope-----	10430	Air Force officer qualifying test, de-	
training (remarks)-----	87	velopment and standardiza-	
employment under fair labor stand-		tion-----	11803
ards act of 1938, code of Fed-		airman qualifying examination, use	
eral regulations-----	1654	to predict completion of basic	
examination, sample questions-----	10111	training-----	13635
learners, employment, pursuant to		merchandising your job talents-----	14200
fair labor standards act-----	16916	predictors of air traffic control	
number, estimated, 1962-----	85	specialists performance-----	13733
reports by State advisory commit-		real work tests for untestable	
tees to Civil Rights Commis-		youth-----	14663
sion-----	6076	Aquaplaning, aircraft, phenomenon-----	202
Apprenticeship and Training Bureau:		Aquarium, National Fisheries Center	
activities (remarks)-----	87	and, <i>see</i> National Fisheries	
Research Division report-----	11817	Center and Aquarium.	
Approach, Naval aviation safety re-		Aquariums:	
view-----	3260	care of tropical fishes-----	15919
Appropriation accounting, <i>see</i> Ac-		effect of different pH values of	
counts and accounting.		water on growth and propaga-	
Appropriations:		tion of Eucyclops serrulatus-----	9011
deficiency, 1964-----		experimental, sea-water systems-----	14282
hearings-----	10285, 12250	Aquatic animals, antimycin A tox-	
law-----	13867	icity-----	19721
reports-----	10257, 12077, 12211	Aquatic insects, chemical elements,	
general Government matters, 1965,		build-up factor of radioiso-	
continue-----		topes, USSR study-----	1288
laws-----	268, 13875, 17347	Aquatic plants:	
reports-----	14066, 19484	intracellular and extracellular con-	
legislative, 1964-----		centration of manganese and	
law-----	1976	other elements-----	6818
report-----	337	pondweeds and pondweedlike plants	
supplemental-----	8256	of eastern North America-----	15917
legislative, 1965-----		Aqueous solutions:	
amend sec. 105(a)-----		dilute clay slurries, electrical de-	
law-----	21148	watering-----	16632
report-----	19576	stannous fluoride, shelf life-----	5911
amendments-----	8256, 10185	Aquifers:	
hearings-----	8565, 15794	artesian pressure decline and land	
law-----	17313	subsidence-----	10661
reports-----	8334, 15557, 15699	Cenomanian-Turonian, of central	
legislative and executive, 1964, sup-		Israel, development and use as	
plemental, proposal-----	282	storage reservoir-----	21358
statements, 88th Congress, 1st ses-		ground-water, interim report on	
sion-----	10351	radioactive contamination-----	5991
supplemental, 1964, proposals-----	12171	major alluvial, along Columbia	
supplemental, 1965-----		river, description-----	12517
hearings-----	17631, 19590	mechanics of aquifer systems	
law-----	21127	(series)-----	14346
reports-----	19458, 19493, 19581	Memphis, Tenn., area systems, hy-	
<i>see also</i> subjects, or names of de-		drology-----	19801
partments, etc., for which ap-		methods of aquifer tests (series)-----	4806
propriations are made.		methods of determining permeabil-	
Appropriations Committee, House:		ity, transmissibility and draw-	
budget process, selected references,		down-----	2424
list-----	10042	salt-water encroachment to major	
hearings-----	2104, 10285-	zones, Savannah area, Ga.-	
4489, 6337-42, 8358-65, 10285-		S.C.-----	19792
201, 12117-119, 17629-631,		sea water in coastal aquifers-----	10653
15700-798-----	342-843,	sedimentary, of Coastal Plain	
reports-----	2069-70, 6303, 8268, 8207, 8334,	southeast river basins, yield-----	6820
8343, 10209, 10245, 10257-258,		test data, shortcuts and special	
12048, 12059, 12098, 13950,		problems-----	4806
19458-----		water in Cretaceous and Pleisto-	
Appropriations Committee, Senate:		cene aquifers-----	6816
hearings-----	515-519, 2229, 4569-70, 8436-37, 12250-	ARA, <i>see</i> Area Redevelopment Ad-	
251, 14125, 17864, 19588-590-----		ministration.	
reports-----	459, 468, 510-512, 2220, 4536, 8416,	Arabs:	
4820, 12211, 14048, 14066,		Marxist theoreticians from Com-	
15698-699, 15707, 15726, 15767,		munist parties, conference-----	1052
15771-772, 17778, 19581-582,		oil battle, political and economic	
21233-----		aspects, translation-----	18436
		Soviet-Arab cooperation growth-----	18327

	Entry
Aradidae, subfamily Mexirinae (Hemiptera), notes on National Museum collection.....	7603
Aral Sea:	
bullheads and aterina, fortuitous settlement and relationship with acclimatized and native fish species, USSR study.....	10804
natural science research, etc., in region, USSR studies.....	5132
Arberg, Harold W., music curriculum guides.....	19632
Arbitration, air transport agreement, with Italy.....	20823
<i>see also</i> Industrial arbitration.	
Arbuzov, Boris A., biography, USSR study.....	5108
Are (electric), <i>see</i> Electric arcs.	
Are cutters, employment outlook.....	7391
Are-discharge metallurgy, USSR.....	13011
Are furnaces and electronic smelting, USSR.....	12710
Arceo, John A., relief.....	15444, 17213, 17675
Arceo, Rolando D., relief.....	15444, 17213, 17675
Archaeology:	
archeological exploration in Mongolia, 1961-62.....	10911
archeological research series.....	20660
inter-agency salvage program, papers—	
departmental edition.....	11813
document edition.....	12018
Arches National Monument, general information.....	21804
Architect of Capitol:	
appropriations, 1964—	
deficiency, hearings.....	10285
legislative—	
law.....	1976
report.....	337
appropriations, 1965, legislative—	
hearings.....	8365, 15794
law.....	17313
reports.....	8334, 15537, 15699
employees retirement benefits, correct inequity—	
law.....	6178
report.....	2225
Architects:	
career opportunities, Veterans Administration.....	20870
employment outlook.....	9384
<i>see also</i> Landscape architects.	
Architectural & Engineering Development Program, Civil Defense Office, highlights.....	11927
Architecture:	
CFA 1964 design awards program.....	21099
definitive designs for naval shore facilities.....	1669, 11728
development program for civil defense, highlights.....	15345
fallout shelter designs, above-ground clay brick masonry.....	6071
industrial, fallout shelters.....	4372
long-term patient facilities, hospital design, references.....	3100
medical education facilities, guide.....	13403
mental health facilities, National Clearinghouse for Mental Health Information, bibliography.....	13416
multiple-occupancy warehouses for poultry and egg wholesalers, improved designs.....	7929
Navy design manual, changes.....	3196, 20889
North Vietnam, translations.....	7034
nursing education facilities, guide—	
planning, Communist China, translations.....	7031
Pueblo Bonito, general information.....	20793

	Entry
Archives, documentation, problems of cybernetics, USSR study.....	20340
<i>see also</i> Records.	
Arctic Aeromedical Laboratory:	
technical documentary reports.....	4242-50, 7980-83, 9976-79, 19140-148, 20955-956.
technical notes.....	4251-52, 7984-87
Arctic Ocean, lights and fog signals, list.....	11479, 21816
Arctic regions:	
bacterial self-decontamination of soils, USSR study.....	12939
heating of polar upper atmosphere.....	7553
helicopter evaluation.....	49
problems (USSR periodical).....	5388
use of EMIT in arctic waters, USSR study.....	10914
whitefish feeding habits in bodies of water, variation and multiplicity.....	5006
<i>see also</i> Subarctic region.	
Arditidae, <i>see</i> Moths.	
Ardizal, P., flat electric cable for interconnecting system components.....	7659
Are you related to a diabetic?.....	18893
Area designation status report.....	1754
Area handbooks:	
Cyprus.....	19210
Ethiopia.....	19211
Germany.....	19212
Japan.....	17048
Nigeria.....	17054
Republic of Sudan.....	17047
Senegal.....	19016
Venezuela.....	15273
Area measurement reports.....	17071-77
Area redevelopment, <i>see</i> Redevelopment (city planning, etc.)	
Area Redevelopment Administration:	
annual report, 1963.....	5927
ARA area analysis and economic development (address).....	8013
ARA case book series.....	5924, 9998, 11820, 13656
ARA field reports.....	11821-824, 13657-660, 15250-254, 17022-23, 19196-197, 20979.
ARA program, appraisal and relationship to economic opportunity and Appalachia programs (address).....	11819
ARA redevelopment areas, value of prime contracts awarded, 1963.....	9996
ARA staff studies.....	11825-826, 13661, 15255
directories, approved projects.....	5925
employment opportunities in federally aided project restricted to individuals having funds to invest in business venture, GAO report.....	21333
industrial prospects, information sources for locating.....	15256
making effective business loan application.....	5928
overall economic development programs, guidebook for redevelopment area organizations.....	13662
press releases.....	3868
proposals for making development program more effective in Jefferson County, Ill.....	11824
technical assistance—	
cumulative report, quarterly.....	11828
iron ore problems.....	11826
Area redevelopment bookshelf of community aids.....	1755, 13662, 15256
Area redevelopment bulletin.....	3262
Area redevelopment manpower reports.....	12332-333, 17931-935, 21275

# INDEX 1964

Entry	Entry
Area studies, national defense education act, NDEA language and area centers, 1st 5 years, report-----	19634
Aresco, Sebastian J., analyses of tippie and delivered samples of coal-----	11343
Argentina:	
atomic energy, cooperation for civil uses, agreement-----	21890
atomic energy, equipment for use at La Plata University, agreement-----	7791
defense, military assistance, agreement-----	15127
establishing business-----	10698
foreign trade regulations-----	14380
Argillites, expansion properties for lightweight aggregate production-----	1434
Arginine, effects of arginine, l-gultamate, and pyridoxine on toxicity of Aeroline-----	19182
Argon:	
atmosphere, hot rolling molybdenum conditions, USSR study-----	1011
electron-ion recombination, microwave interferometer measurements-----	1452
shock tube heat-transfer experiments to measure thermal conductivity, evaluation-----	7522
thermophysical properties from 0 to 300° K, bibliography-----	14941
Argonne National Laboratory, zero gradient synchrotron facility, dedication (remarks)-----	132
Arias, Alan, thermal shock resistance of zirconia with metal additions-----	20594
Ariel, see Satellites.	
Aristarchus, LAC 39, lunar chart-----	4255
Arithmetic:	
instructor's guide and lesson plans, USAFI manual-----	553
test, exhibit-----	6089
Arizona:	
annual survey of manufactures, 1962, standard metropolitan areas and large industrial counties-----	6032
area measurement report-----	17071
climatic summary, 1951-60, decennial census-----	15155
climatological data-----	3529
electric rate book-----	4704
fresh fruits and vegetables, interstate hauling by rail and truck-----	16959
Gambel oak, specific gravity-----	14325
highway construction practices, report-----	12111
labor organizations, reporting, register-----	16574
mineral industry, minerals yearbook chapter-----	1406
municipal waste facilities, 1962 inventory-----	3109
municipal water facilities-----	18914
natural resources-----	842
Navajo Indian Reservation road construction program, deficiencies in administration, GAO review-----	18087
pinon-juniper type, effects of grazing, fire, and tree control-----	16969
precipitation data, hourly-----	3578
public land, sell to Kalbub Lumber Co-----	6227, 13863, 14031
snow survey measurements, 1938-64-----	18955
southern, earth fissures-----	18117
Arizona-Continued	
statue of Eusebio Francisco Kino-accepting, reports-----	17554, 17802
place temporarily in rotunda of capitol and hold ceremonies, reports-----	17553, 17801
proceedings at unveiling, authorize printing, reports-----	17560, 17803
tellurium resources-----	5493
water supply outlook and snow surveys-----	4137
women workers, 1960-----	16928
Arizona Milling Co., relief-----	312, 1900
Arkansas:	
annual survey of manufactures, 1962, standard metropolitan areas and large industrial counties-----	6031
climatological data-----	3529
costs of electric power and fuel for driers in cotton gins-----	2261
eastern, vicinity of U.S. Highway 70, ground water resources-----	19802
electric rate book-----	10524
labor organizations, reporting, register-----	16573
mineral industry, minerals yearbook chapter-----	1407
Mississippi River and tributaries, fishery products, wholesale dealers, list-----	733, 18023
municipal waste facilities-----	3107
municipal water facilities-----	18912
pecan production, economic aspects-----	17900
precipitation data, hourly-----	3578
sulfur, resources and production-----	20475
women-----	
labor laws, summary-----	13544
legal status-----	19030
workers, 1960-----	9896
Arkansas River and Valley:	
between Little Rock and Fort Smith, ground-water potential of alluvium-----	823
lower, ground water-----	8780
reconnaissance of ground-water resources-----	2434
spillway for typical low-head navigation dam-----	21282
stability of riprap and discharge characteristics, overflow embankments-----	14212
water supply outlook and snow surveys of drainage basins-----	4138
Arkansas-White-Red Basins Inter-Agency Committee, minutes of joint meeting, 46th meeting-----	11347
Arkley, Rodney J., soil survey, eastern Stanislaus, Calif-----	21878
Arlington Hall Station, Defense Defense Intelligence Agency building location, hearings-----	12122
Arlington National Cemetery, general information-----	5940
Armament kits:	
XM-5, equipment for UH-1B helicopter, flight evaluation-----	13621
XM-6E2, evaluation of UH-1D equipped with kit-----	13620
Armano, Paolo, relief-----	6257, 10385, 11993
Armed Forces:	
appropriations, 1965-----	
hearings-----	6337
law-----	17305
reports-----	10209, 15533, 15698
appropriations, 1965, military procurement-----	
hearings-----	6344
law-----	8227
reports-----	6282, 6289, 6319, 6469
censorship, Army field manual-----	8025
civil action, military role in nation building-----	4277

# JANUARY-DECEMBER

	Entry
Armed Forces—Continued	
claims settlement by Federal agencies—	
law .....	17416
report .....	17744
colonels and carpenters, strength of	
Nation (address) .....	7356
constitutional rights of military personnel, hearings, summary	10426
courts martial manual, 1951, addendum, changes .....	2250, 21247
defense procurement circular—	6539
dependents—	
baggage, etc., advance return—	
hearing .....	17866
law .....	17290
report .....	15740
deceased, transportation at Government expense, provide, report .....	10252
evacuation from Panama and Cyprus, payment of expenses, authorize—	
hearing .....	19591
law .....	19421
reports .....	13937, 19563
manual for civilian physicians and dentists providing care .....	2254
medical care program, DoD pamphlet .....	19198
digest of opinions of Judge Advocate General .....	2253, 3420
duty, honor, country (address) .....	8020
employees, non-United States citizen, social security coverage, agreement with Philippines .....	3147
enlisted members, cancellation of indebtedness, authorize, report .....	13941
excessive costs of duplicate automatic teletype switching centers, GAO report .....	8719
inventions wanted, list .....	1506, 5560
it pays to stay in, new uniformed services pay act of 1963 .....	11830
members, cash awards program for suggestions or inventions—	
hearings .....	17637, 19591
report .....	17530
military personnel—	
maintenance activities, inefficient and uneconomical utilization, Fort Campbell, Ky., Army Dept., GAO report .....	12491
reporting early for temporary duty assignments, unnecessary per diem payments, Navy Dept., GAO report .....	8741
milk program, extend—	
hearings .....	12115
law .....	17388
reports .....	10244, 17772
Negro serviceman and family housing .....	10099
news style guide .....	17030
personal affairs, Defense Dept. pamphlet .....	4275
personnel—	
automobiles, military departments methods of shipping to and from Alaska, amend United States code—	
hearings .....	13989, 17866
report .....	13943
household goods, unnecessary costs for temporary storage, GAO report .....	2408
labor cost, control, hearings .....	17601
participation in international sports, increase expenditure ceiling—	
hearing .....	6496
report .....	328
President's tribute to Armed Forces (address) .....	17032

	Entry
Armed Forces—Continued	
procurement regulations, revision—	3264
qualification test, job performance of enlisted men scoring low .....	15276
reemployment rights of Federal employees who perform duty .....	15359
retired members, dual compensation-dual employment laws, modernize—	
hearing .....	6523
law .....	17307
reports .....	331, 6279, 6485
statement of purpose, etc. ....	12152
retired serviceman's family protection plan .....	20982
retired servicemen's survivors, annuity rights, protect—	
hearing .....	17869
report .....	17847
Rumania, education of youth .....	21521
status of forces, NATO treaty—	
agreement with Federal Republic of Germany .....	1603
criminal jurisdictional operation—	
hearings .....	2230, 17867
reports .....	2227, 14100, 17855
transportation of house trailers and mobile dwellings of members of uniformed services, increase allowances—	
hearing .....	15799
law .....	17265
reports .....	10250, 12100, 14117
unified action, principles, doctrines, etc., governing .....	4882-83, 6876, 8845
United Nations operations in Korea, logistical support, agreement with Australia, etc. ....	11627
unnecessary costs being incurred for maintenance and payment of allotments of military personnel, Department of Army, GAO report .....	18092
USSR—	
history of inter-relationship between national blood banks and military medical service .....	7064
military councils and political controls .....	20009
training and indoctrination .....	12754
voting information, 1964 .....	1757, 17029
waiver of collection of erroneous payments, report .....	15509
see also Pay, allowances, etc.—Reserve components of Armed Forces.	
Armed Forces Day, power for peace, 1964, speakers' guide for service spokesmen .....	8467
Armed Forces Industrial College, see Industrial College of Armed Forces.	
Armed Forces Information and Education, DOD pamphlets .....	89-90, 1757, 4275, 8020-21, 11830, 17029-30, 19198, 20981-983.
Armed Forces Institute:	
correspondence courses offered by colleges, etc., DOD pamphlet .....	89
exercise book, English as communication skill .....	10443
manuals .....	653-656, 6537, 8462, 10443, 21248
study guide, writings of American authors .....	21248
supply brief .....	10452
supply bulletin .....	4609
supply notes .....	17899
teacher's guide and key, introductory social studies and English as communication skill .....	8462
textbook .....	557

Do not order from index; see indicated entry

Page 105



# INDEX 1964

	Entry		Entry
Armed Forces Institute of Pathology, 1st century, 1862-1962, general information-----	10021	Armstrong, William R., testimony, hearings-----	6526
Armed Services Committee, House:		Army:	
calendar-----	3644	aircraft, noise problems associated with operation-----	5940
committee prints-----	8366,	aircraft parts supplied by overhaul contractors, unnecessary costs incurred, GAO report-----	12496
10298, 21200-201		airplanes, fundamentals of mainte- nance-----	21005
hearings-----	388-391,	aviation-----	
2105, 6343-45, 8367, 10292-297, 12120-123, 13988-995, 15583, 17632-642.		crash injury research, summary-----	13497
investigation and studies, matters relating to procurement, etc. by Defense Dept., expenses, re- port-----	4473	digest-----	4111
reports-----	327-329,	standard flying sense-----	10005
362, 364-367, 2071, 6282, 6334, 10246, 10250-253, 10269-271, 13932-937, 13939-945, 13947, 15458, 15504-505, 15518-521, 17522, 17524-526, 17528-531, 17534, 17599, 19491.		chaplaincy, challenge of-----	19204
subcommittee report-----	19498	chief of staff, nomination of Harold K. Johnson, hearing-----	19592
Armed Services Committee, Senate:		combat performance of EM with disciplinary records-----	21006
calendar-----	3663	command information program-----	17044
committee prints-----	6493, 10410	communications, troop topics-----	13675
hearings-----	521-523,	Communist China, how officers and men should study works of Mao Tse-tung-----	12981
2230, 4571-72, 6494-96, 12252, 14125, 14127, 15795, 15799, 17863-869, 19591-592.		dependents and civilian employees, medical self-help training pro- gram, pamphlet-----	106
investigations and studies, ex- penses, report-----	6442	drill and ceremonies, field manual-----	17037
reports-----	2209-12,	enlisted input, methods for im- proving-----	15277
2227, 4567, 6469, 12206-207, 14053, 14069-70, 14094-97, 14100, 14110-119, 15678, 15727- 730, 15739-742, 17827-830, 17832, 17847-855, 19563-564, 19566, 21234.		enlisted personnel, allocation, op- timum computerized system development-----	13687
Armed services papers-----	388-391,	enlistment screening test-----	
2105, 6344-45, 8367, 10292-297, 12121-123, 13988-995, 15583, 17633-642, 19498.		feasibility of abbreviated forms, simulated branching, prelimi- nary evaluation-----	15275
Armed Services Technical Information Agency:		facilities, basic criteria and con- struction standards, engineer- ing and design manual-----	19655
descriptors thesaurus, supp-----	14165	field, air delivery of supplies and equipment, field manual-----	20990
handbooks, etc., cataloged, report bibliography-----	14166	firepower, troop topics-----	10006
PERT, program evaluation and re- view technique, bibliography-----	93	food adviser, technical manual-----	15272
Armenia, manuscripts in Freer Gal- lery of Art-----	6752	general information, career oppor- tunities, etc., pamphlet-----	20995
Armenian Soviet Socialist Republic, nonferrous metallurgical enter- prises, inadequate utilization of production capacities-----	16112	historical program, 1965-----	9492
Armored force, cavalry platoon and troop, air cavalry troop and divisional armored cavalry squadron, field manual, change-----	15264	information, basic guide, pamphlet-----	15268
Arms, Fred S., soil survey report, Adair County, Ky-----	13459	information digest-----	3265
Arms (firearms), see Firearms.		information program support series-----	11842
Arms Control and Disarmament Agency:		installations and major activities in continental U.S., list-----	104
annual report-----		internal review guide, pamphlet-----	15267
departmental edition-----	5938	job performance of enlisted men scoring low on qualification test-----	15276
document edition-----	6207	Judge Advocate legal service, pamphlets-----	98-101, 1761, 4282-83, 5945-46, 8027-32, 10002-4, 11839-841, 13671-674, 17039, 19205-206, 20992-993
appropriations authorization and security procedures for con- tractor employees, amend act, law-----	266	memorial tablet in honor of troops quartered in Capitol during Civil War, report-----	17555
appropriations, 1964-----	515	military civic action-----	11844
hearings-----	511, 2082	military personnel ordered to Canal Zone, helpful hints, pamphlet-----	21000
reports-----		mobility-----	11843
appropriations, 1965-----	10288, 15791	officers, erroneously paid uniform allowances, relief-----	10591
law-----	17386	hearing-----	19246
reports-----	10245, 21193, 21233	law-----	19246
research and studies, report-----	11833	reports-----	13934, 17850
Armstrong, Gerald R., vibratory com- paction techniques for radio- active source fabrication-----	19230	organization for major missions Paraguayan, road construction, etc., capability, agreement-----	9834
		pathfinder operations, field man- ual-----	97
		peer rating stability in changing groups-----	13686

	Entry
<b>Army—Continued</b>	
personnel—	
electronics selection battery validation, experimental measures—	21008
learning to live overseas, pamphlet—	13676
procurement legal service, pamphlets—	108, 4287, 10010, 11846, 13679, 19213
procurement procedure, change—	4280
progressive, 1775-1984—	10007
recruiting & career counseling journal—	3965
register, Jan. 1, 1964—	
departmental editions—	10017-19
document editions—	10181-183
research and development magazine—	3266
safety, unit management—	20999
soldier's career, pamphlet—	17042
terminal facilities guide, Defense Supply Agency handbook—	560, 6541
trained enlisted personnel, improper utilization, GAO report—	10604
troop topics—	4284, 8033, 10006-8, 11843-844, 13675, 15269, 17041-43
United States Army in World War II—	9493, 11312, 20462
you and your community—	17041
see also Military supplies—Pay, allowances, etc.—Retired officers, etc.	
Army Aeromedical Research Unit, report—	5949
Army Air Force, buying aircraft, materiel procurement, World War II, special studies—	20462
Army Audit Agency, bulletin—	4100
Army Department:—	
air conditioners, unnecessary planned procurement, GAO report—	4770
aircraft engines, failure to separate accessories from spare parts, GAO report—	6773
appropriations, 1964—	
deficiency, hearings—	10285
military construction, hearings—	517
public works, hearing—	520
appropriations, 1965—	
military construction, hearings—	10291, 12118
public works—	
hearings—	12119, 15798
law—	17370
reports—	12098, 15767, 17572
Army historical program, 1965—	9492
Army regulations—	15670, 15263
Assistant Secretary, nomination of—	
Hawkins, Willis Moore, hearings—	523
Luevano, Daniel M., hearing—	14127
Pratt, Edmund T. Jr., hearings—	521
brake lining kits, improper disposal, GAO review—	18089
chiefs and executives, organization chart—	3569
civilian personnel pamphlet—	5941
8th Army, Korea, communications and electronics equipment, unnecessary costs due to inefficient, etc., supply and maintenance practices, GAO report—	10600
employee organizations, supervisor relationships with—	5941
engineer equipment overstated by White Sands Missile Range, N. Mex., GAO report—	6790
excessive charges for tank components under contract with Chrysler Corporation, GAO report—	4757

	Entry
<b>Army Department—Continued</b>	
field manuals—	97, 4281, 5943, 8025-26, 10001, 11835-836, 15264-266, 17036-38, 19203, 20990
meat processing ration issue, technical manual—	17053
military personnel—	
maintenance, inefficient and uneconomical utilization, Fort Campbell, Ky., GAO report—	12491
shipment of household goods improperly classified as professional items, GAO report—	8732
travel of dependents, improper payments, GAO report—	6767
missile system, unsatisfactory, development, procurement, and deployment, GAO unclassified summary—	6782
pamphlets—	98-108, 1761-63, 4282-87, 5944-48, 8027-35, 10002-10, 11839-846, 13671-679, 15267-271, 17039-49, 19204-213, 20991-21002
procurement—	
M151 utility truck major assemblies, unnecessary planning, GAO report—	8743
M403 rocket handling unit, unnecessary costs incurred, GAO report—	8737
publications, price list—	3093
report 1963—	17896
small business participation in Government procurement, 1963, conference—	12283
technical manuals—	109, 1765, 4288-90, 8038-43, 10012-15, 11847-849, 13680-684, 15272, 17051-53, 19215-222, 21003-5
trained enlisted personnel, improper utilization, GAO report—	10604
unnecessary costs—	
aircraft engine overhaul, etc., contract without competition, GAO report—	6786
furnishing ammunition for test firing M14 rifles, GAO report—	8736
Government production of M14 rifle repair parts rather than procurement from commercial sources, GAO report—	6789
Improper retention of overpayments by Burroughs Corporation, GAO report—	10623
leasing electronic data processing system by Chrysler Corporation, GAO report—	10621
leasing rather than purchasing electronic data processing equipment, GAO report—	794
maintenance and payment of allotments of military personnel, GAO report—	18092
noncompetitive procurement of military $\frac{1}{4}$ -ton trucks, GAO report—	18093
sole-source procurement of portable radar sets, GAO report—	21342
tool sets, relating to reassignment of management responsibility to Defense Supply Agency, GAO report—	6788
unnecessary disposal of spare components procured for Hawk air defense guided-missile system, GAO report—	19768
unnecessary procurement—	
cargo transporters, GAO report—	19769
due to failure to identify and utilize available missile spare parts, 8th Army, Korea, GAO report—	12506
use of polygraphs, hearing—	10315

# INDEX 1964

Entry	Entry
Army Engineer Research and Development Laboratories:	Arnold Engineering Development Center, technical documentary reports 4253, 7988
press releases 3869	Arnoux, Denise J., see Escobar, Denise J.
technical reports, TR series 10482, 14201	ARO, see Aerospace Research Office.
Army hospitals, see Military hospitals.	Aronow, Morris, and other employees of Post Office Department, relief 6434, 8208
Army Library:	Aroostook County, Maine:
checklist of periodicals currently received 19043	ammoniacal-ammonium carbonate leaching of manganiferous materials from southern district 7446
special list 19043	potato industry, economic review 9993
Army Materiel Command:	soil survey—
AMC historical studies 20987	northeastern part 13457
AMC pamphlets 95, 4279, 5939, 8024, 10000, 13669, 17034-35, 19201, 20988-989	southern part 20807
AMC publications, military, index 17034, 20988	Array theorem, see Antennas.
AMC safety manual 15262	Arresting gear, BAK-12/E32A portable aircraft arresting barrier 1732
management improvement program, plowback, improvements reported 1759, 11838	Arrests, District of Columbia, investigative, Mallory and Durham rules, amend criminal laws, hearings 4579, 8443
regulations, AMCR (series) 15262	Arrington, James P., longitudinal characteristics of configurations at hypersonic Mach numbers in conical and contoured nozzles 20612
Army Materials Research Agency, technical report AMRA CR series 7660	Arrowgrass, livestock poisoning in Western States, reducing losses 20915
Army Medical Research and Nutrition Laboratory, Fitzsimons General Hospital:	Arrhythmia, drug treatment, NIH supported research grants 16743
reports 110, 8044-45, 19223-224	Ars orientalis, arts of Islam and the East 4751
reports and reprints, bibliography 13688	ARS series 11-16, 1876-87, 4188-91, 5796-97, 7890-97, 9916-21, 11740, 13563-571, 15194-199, 16932-934, 19051-55, 20896-902
Army Medical Service:	Arsenic:
annual report, 1963 17055	minerals yearbook chapters 11813, 13101
college students, dietetic interns, qualified dietitians, educational opportunities 21009	sulfides, low-temperature heat capacities and entropies at 298-15° K 18694
occupational therapy, educational opportunities for students 1766	Art:
Army Missile Command:	grants for encouragement—
RE-TR series 7661	hearings 13998
RG-TR series 7662	report 2215
Army National Guard, see National Guard.	instruction, space and facilities 4645
Army Personnel Research Office:	national arts and cultural development act of 1964—
research publications, 1964, abstracts 21007	law 17437
USAPRO technical research notes, 13685, 15274-76, 21006-7	reports 12095, 17544
USAPRO technical research reports 13687, 15277, 21008	National Gallery of Art—
Army posts, see Military posts.	color slides and filmstrips to be borrowed 9640
Army Research Office (Durham):	general information 5551
research in progress 8036-37	traveling exhibits of framed reproductions 7584
Army Reserve:	oriental, Islam and the East 4751
Army reservist (periodical) 3267	oriental studies 6752
disability and death benefits for reservists, authorize—	recent developments in Soviet bloc, hearings 8381
law 19424	works and reproductions, catalog of copyright entries 2249, 19609
reports 15542, 19565	works of art in United States Capitol, print as House document, reports 17569, 17823
law 19428	see also Performing arts.
reports 13940, 17832	Artamonov, Nikolai, relief 19546
reemployment rights, briefing sessions and program 20994	Arteries:
Army supplies, see Military supplies.	catheter for right heart and pulmonary artery implantation 8004
Army Transportation Research Command:	extremal nerves, influence of gravitational overloads, USSR study 14616
reports 13493-497	intrarenal hemodynamic changes following acute arterial occlusion 5997
technical reports 1636, 3172-74, 5722-26, 7815-19, 9857-58, 11666-667, 15136-138, 16893-896, 19899-19001, 20854-859, 21905-911.	Arterioplasty, human morphological changes with lavsan prosthesis, USSR study 14612
Arno, John R.:	
soil survey reports, Aroostook County, Maine—	
northeastern part 13457	
southern part 20807	
Arnold, D. M., proton damage in semiconductor devices 11354	
Arnold, John E., predictor for remote control systems operating with signal transmission delays 3034	
Arnold, Joseph F., pinyon-juniper type of Arizona, effects of grazing, fire, and tree control 16969	

	Entry		Entry
Artesia, N. Mex., appraisal of potential ground-water salvage along Pecos River	8779	Asia-Continued	
Arthritis, nurse and arthritis	13411	magnetic anomalies in transition region from continent to Pacific Ocean, USSR study	969
Arthropodborne diseases, other than malaria, preventive medicine in World War II	17056	market indicators	14372
Artificial kidney, Soviet model, description	8962	social science research studies in progress, list	20813
Artificial limbs:		south—	
new prosthetic hand developed in Yugoslavia	21400	research studies completed, list	7753
upper, hydraulic, pneumatic and electrical devices in prostheses, USSR study	5356	research studies in progress, list	9789
Artificial satellites, see Satellites.		south and east—	
Artillery:		geographic regions	11617
ammunition, manufacture of metallic components	17035	translations	1159
field artillery support, Fleet Marine Force manual	18653	2535, 2602, 2610, 2896, 2913, 5123, 5167, 5284, 7156, 7218, 7232, 7271, 7329, 9050, 12982, 16459, 19842, 19864, 19931, 20078, 20185, 2147	
Artists, commercial, employment outlook	9386	southeast—	
ARTS (advanced radar traffic control system), see Air traffic.		annotated bibliography, western language sources	21630
Arts and crafts:		hunger and poverty, struggle against, observations	2730
construction and operation of hobby craft shops	5582	Indonesia vs. Malaysia, crisis—preserving peace	5936
Ojibwa crafts	2439	promote maintenance of international peace and security—	17461
oriental, Islam and the East	4751	law	17267
Arts Foundation, National, see National Arts Foundation.		reports	15554, 15770
Arts, National Council on, see National Council on the Arts.		research studies completed, list	7732
Arts, National Foundation, see National Arts Foundation.		research studies in progress, list	9788
Arvesen, John C., radition shields for thermal control of vehicles on moon	9573	situation (address)	13406
As we go forth, message to graduates in health professions	7833	special study mission, Oct. 3-19, 1963, report	334
Asal, Gene, Bureau of Mines chromium supplied for research, July 1953-July 1961	7429	United States policy, analysis of current situation	11831
Asbestos:		Soviet Central, Uigur, Tunga, and Korean minorities	20069
minerals yearbook chapter	18657	west—	
workers, employment outlook	9421	agricultural situation, 1964	6557
Ascariid, see Nematode worms.		tobacco industry	8627
Ascites, Ehrlich's carcinoma, effect of sarcolysin on life cycle	9322	Asparagus, culture	1699
Ascorbic acid, see Vitamins.		Aspect ratio, see Wings (aircraft).	
ASCS, see Agricultural Stabilization and Conservation Service.		Aspergilli, cellulose decomposition	7951
ASD, see Aeronautical Systems Division.		Asphalt, epoxy-asphalt concrete paving mixtures, laboratory and field study	6598
Ash (tree):		see Roofing.	
green, provenances in Northeast, 13-year growth	8650	Asphyxia, report of 5 accidents involving asphyxiation of 6 drivers	14405
Ash content, see Coal.		Assassination of President John F. Kennedy, President's Commission on, see President's Commission on Assassination of President John F. Kennedy.	
Ashes, coal, semiquantitative spectrochemical method for analysis	16645	Assateague Island National Seashore, establish, hearing	19601
Ashford, Douglas E. second and third generation elites in Maghreb	9804	Assaying:	
Ashizawa, Roy Y., mineral industry of Hawaii	21698	evaluating low-grade mineral deposits, application of simulation	18685
Ashley, E. Everett, 3d:		Florida phosphate data, application of statistical analysis in evaluating bedded deposits of variable thickness	20502
our nonwhite population and its housing, changes between 1950 and 1960	832	phosphoria formation deposits, statistical analysis of sample and assay data	9518
senior citizens and how they live, pt. 2, the aging nonwhite and his housing	4827	statistical interpretation of sample assay data from Mi Vida uranium mine, Big Indian district, San Juan County, Utah	21717
Ashwood, Oreg., geologic reconnaissance of area	4778	Assets and liabilities, see Banks and banking—Federal reserve member banks—Property.	
Asia:		Assistance, see Public assistance.	
central, economic potential	20327	Associations, see Building and loan associations.	
contributions to hydrology of Asia and Oceania (series)	815, 12518, 15955, 21358	Assur, Andrew, growth, etc., of sea ice	21277
east—		Ast, Kathryn C., relief	15449, 17686
research studies completed, list	7751	Asteroides, see Starfishes.	
research studies in progress, list	9787	Asthma, general information	1557
French delegation's interview with Mao Tse-tung and impressions following tour	8987	ASTIA, see Armed Services Technical Information Agency.	



# INDEX 1964

Entry	Entry
ASTM, <i>see</i> American Society for Testing and Materials.	Astronomy—Continued
Astoria formation, <i>see</i> Miocene period.	lunar, recent developments, USSR
Astrobiology, <i>see</i> Space biology.	studies 19989
Astronautics:	meteor, progress, 1958-61, USSR
biological studies under space flight and weightlessness conditions, 16522	study 5361
examination of onboard training for extended space flights 21761	moon, influence of form on its motion, USSR study 6996
first manned group flight into outer space, Aug. 11-12, 1962, USSR study 14613	new methods in, USSR studies 5010
higher schools, advanced weapons, space flight, USSR translations 7153	price list 1552
interplanetary missions, high-energy chemical stages performance analysis 5507	problems of cosmogony, USSR articles 10880, 12691-692, 12808, 16037
masters of space 21868	Soviet and Chinese articles, English abstracts 3445
medical aspects of space flight 16658	Soviet bloc research 4044
n-body code, Fortran code for solution of space mechanics problems on IBM 7090 computer 1453	stellar, USSR study 9095
NASA manned space flight team 9537	theory of variation of astronomical constants, application of Pfaff's method 11417
Project Mercury briefing, hearing 414	USSR research 8932
rhythm variations of neurons of reticular formation during lateral overloads 18797	<i>see also</i> Radio astronomy.
Saturn 1, Block 1 flight test vehicles, aerodynamic analysis 7498	Astrophysical Laboratory, Pulkovo, USSR, new, general information 20298
space flight, chromosome rearrangement developing in microspores of <i>Tradescantia paludosa</i> , USSR study 4890	Astrophysics:
space flight, USSR, aspects of training 1083	commentary, study 14772
Tereshkova, Valentina, background of flight 20376	instrumentation for research 1737-39, 4254
<i>see also</i> Bioastronautics.	Smithsonian contributions 13449, 18943
Astronauts:	ATC, <i>see</i> Air traffic.
ability of pilot to control Apollo-type vehicle during atmosphere entry, study 18788	ATC manuals 5919-20, 9990, 13653, 20974
behavioral testing during 7-day confinement 3010-11	Atchafalaya River, floodways and outlet 7462
diary of pilot-cosmonaut, USSR 12930	Atchison, Thomas C.:
electroencephalogram in selection 7998	comparative studies of explosives in granite 13114
examination of onboard training for extended space flights 21761	decoupling effect on explosion-generated strain pulses; in rock 5481
flight instructor, from airplane to spaceship, notes, USSR 12617	explosives in limestone 9512
NASA manned space flight team 9537	Atchison, Topeka & Santa Fe Ry., accidents 6872, 8842, 10716, 19830
pilot control of orbital docking of attitude-stabilized vehicles, visual-simulator study 5513	Aterina, Aral Sea, fortuitous settlement, and their relationship with acclimatized and native fish species, USSR study 10804
pilots' performance, effects of high sustained acceleration 14843	Athelism:
United States, photographs and biographies 420	USSR—
print as Senate document, report 470	education, actively conducted 9234
use of man in rocket guidance and control 14789	scientific-athelistic propaganda and criminal-legal struggle 20369
Astronomers:	scientific-athelistic work of CPSU, new stage 9301
employment outlook 9406	scientific, bring theory up to level of current requirements 16071
examination announcement 13798	Athens, Ga.:
discontinuance notice 11942	population, special census 4351
Ukrainian, work 21593	research and field laboratory for water pollution control 11573
Astronomical observatories, orbiting, ground operation equipment 3007	Atherosclerosis, rabbits, anti-atherogenic action of cortisone and methylandrosteradiol, USSR study 12730
Astronomy:	Athletes, USSR, medical follow-up on training 7340
astronomical-geodetic plumb-line deflections, determination of interpolation error in west Bohemia Kraje, Czechoslovakia 2906	Athletics:
astronomical papers 16773	Scientific-Methodology Athletic Council, USSR, plenum, results 20131
astronomical phenomena, 1967 14989	USSR program, analysis 18373
equalization of USSR astronomical-geodetic network, problems 12686	Athol, Mass., consumer expenditures and income, 1961 11269
interpolation errors of astronomical-geodetical deflections of vertical in western Czechoslovakia, determination 12623	Atkinson, Charles H., feasibility of using nuclear explosions to increase petroleum recovery 14764
	Atkinson, William A., comparative seed-tree and selection harvesting costs in young-growth mixed-conifer stands 2377
	Atlanta, Ga.:
	occupational wage survey 18632
	terminal, advanced radar traffic control system, facility training manual 14221
	Atlantian (periodical) 3271
	Atlantic alliance (address) 13465

# JANUARY-DECEMBER

	Entry
Atlantic City, N.J.:	
area redevelopment manpower report	17931
beach erosion control, engineer report	
departmental edition	15863
document edition	15411
hurricane survey, engineer report	
departmental edition	10483
document edition	10188
Atlantic Coast:	
coast pilot—	
Cape Cod to Sandy Hook, supplement	4406
Cape Henry to Key West	17151
supplement	6107
Eastport to Cape Cod, supplement	6105
Gulf of Mexico, Puerto Rico, and Virgin Islands, supplement	6108
Sandy Hook to Cape Henry, supplement	6106
light list—	
Little River, S.C. to Rio Grande, Tex., and Antilles	6112
St. Croix River, Maine, to Little River, S.C.	4408
menhaden catch along Atlantic Coast, age and size, composition	18029, 19738-739
North America, tidal current tables, 1965	19342
south, crab larvae (Callinectes), in plankton collections from cruises of M/V Theodore N. Gill, 1953-54	4743
storm warning facilities charts—	
Maine to New York	13521
New Jersey to North Carolina and Chesapeake Bay	13522
New York to New Jersey	13523
North Carolina to Georgia	13520
transportation lines	6596
waterborne commerce, 1962	626
Atlantic Missile Range, supplies, excessive costs incurred in multiple management, GAO report	8716
Atlantic Ocean:	
deep turbulent exchange, direct determination of intensity, results, USSR study	12745
luminescence of waters, USSR	2619
menhaden catch along Atlantic Coast, age and size, composition	18029, 19738-739
North—	
dynamic characteristics of sub-polar front, USSR study	6885
station Delta, 44° N, 41° W, oceanographic observations	13815
station Echo, 35° N, 48° W, oceanographic observations	13814
northwest, fisheries convention of 1949, protocol	10361, 14029
notice to mariners	3800
radio navigational aids	5579, 14993, 20675
radio weather aids	13313, 20677
South, oyster industry	10558
strontium-90 in surface waters, USSR study	10901
underseas test and evaluation center, establishment in Bahama Islands, agreement with United Kingdom of Great Britain and Northern Ireland	1612
western north, oceanographic data, inventory	6704
Atlantic States:	
floods, south Atlantic basins, James River to Savannah River, magnitude and frequency	12521

	Entry
Atlantic States—Continued	
Middle—	
annual survey of manufactures, 1962, statistics for States, standard metropolitan statistical areas, and large industrial counties	4343
fisheries, annual summaries	10547, 17996
north Atlantic slope basins—	
Maine to Connecticut, floods, magnitude, frequency	21359
surface waters, Oct. 1950-Sept. 1960, records—	
Maine to Connecticut	14351
New York to York River	14352
north, fishery research and services of Commercial Fisheries Bureau	2336
research and field laboratory for water pollution control	11573
south, annual survey of manufactures, 1962, statistics for States, standard metropolitan statistical areas, and large industrial counties	6029
south Atlantic slope basins, surface waters, Oct. 1950-Sept. 1960, records—	
James River to Savannah River	18142
Ogeechee River to Pearl River	10659
yield of sedimentary aquifers of Coastal Plain southeast river basins	6820
Atlas, David, radar reflectivity of storms containing spongy hail	16152
Atlases:	
Bulgaria, national atlas, brief description	16372
China, provincial	21558
congressional districts, 89th Congress	19289
copyrighted—	
Jan.-June 1963	4595
July-Dec. 1963	17894
national atlas of United States, separate sheets	1657, 7844, 21921
solar flare effects observed on long VLF paths during 1961	9637
world atlas of photography from Tiros satellites I to IV	20525
X-rays, New Jersey radium cases	19236
Atmosphere:	
absorption of thermal radiation in 9.6-μ ozone band region	14915
Air Force interim supplemental atmospheres to 90 kilometers	7979
altitude variation of Rayleigh, aerosol, and ozone attenuating components in ultraviolet region	19149
atmospheric density, horizontal and vertical distributions up to 90 km	19139
cloudless, influence of air humidity on development of convective motions, USSR study	975
diffusion parameters of gases, Czechoslovak study	5081
electric conductivity and field, measurements in Shenandoah National Park, Va.	5612
hydrodynamic forecasting of pressure fields in mid-level for entire sphere of earth considering orography, USSR study	6884
lower, geopotential fields, nonadiabatic factors in short-term forecasting, USSR study	20321, 20625
lunar, history	3008
Mars, experiments from small probe	3008
movements, results of radiation measurements from satellites in nonadiabatic model, USSR study	6905

# INDEX 1964

	Entry		Entry
Atmosphere—Continued		Atmospheric electricity :	
nuclear meteorology, problems-----	8048	electricity in terrestrial atmosphere	
nuclear submarine-----		above exchange layer-----	5518
hydrocarbon analyzer, develop-		potential aircraft fuel tank vent	
ment-----	13345	fires and explosions caused by-----	7550
purification and control, status of		Atmospheric entry :	
chemical research-----	18863	aerodynamic and rocket braking-----	11392
optics, USSR articles-----	14909	angle-of-attack convergence of	
ozone, effects of non-photochemical		spinning bodies entering plane-	
processes on meridional distri-		tary atmospheres at large in-	
bution and total amount-----	14844	clinations to flight path-----	21777
ozonesonde observations over North		capsule type vehicle, direct and skip	
America-----	7966	entries, guidance with terminal	
physics-----		control techniques at parabolic	
Journal of research, National Bu-		velocities-----	7503
reau of Standards-----	8631	convection and radiative heating of	
problems, translation-----	7565	shapes entering atmospheres of	
planets-----		Venus and Mars at suborbital	
containing water vapor, settling		speeds-----	3026
time of fixed amount of oxygen-----	1480	flight-path angle of reentry vehicle	
radiative equilibrium, Venus, ap-		in upper atmosphere, approxi-	
plication of strong line absorp-		mate solutions-----	16696
tion law-----	18742	graphite ablation rates and surface	
polar upper, heating-----	7553	temperatures, analytical and	
pressure fields, forecasting with		graphical prediction-----	9974
hydrodynamic equations, USSR		guidance to reference trajectories	
study-----	4960	for lifting reentry at supercl-	
solar radiation, long wave and re-		cular velocity-----	13247
lected, methods to compute		mass addition in stagnation region-----	18795
data-----	8763	pilot's ability to control Apollo type	
sonic boom propagated from super-		vehicle during atmosphere en-	
sonic aircraft, effects of flight		try, study-----	18788
path and atmospheric varia-		radiation from slotted-cylinder an-	
tions-----	7562	tennas in reentry plasma en-	
space-cabin atmospheres-----		vironment-----	7544
fire and blast hazards-----	11358	radio attenuation due to plasma	
oxygen toxicity-----	20536	sheath on hypersonic blunt-	
spacecraft, effects of prolonged ex-		nosed cone-----	3021
posure to oxygen at total pres-		reentry-----	
sure of 190 mm. Hg-----	71	capability of proportional-type	
spectral distribution of outgoing		lateral control system in pro-	
radiation-----	14917	viding aerodynamic heading-	
submarine studies aboard USS		angle trajectory control-----	14876
Sculpin-----	18865	environment simulators, operat-	
thermal radiation of CO-----	14916	ing capabilities-----	18723
turbulence, power spectral measure-		simulated meteor-----	11400
ment in severe storms and cum-		static longitudinal characteris-	
ulus clouds-----	20596	tics of Project Fire-----	5515
turbulent diffusion in surface layer		rocket vehicle for producing arti-	
of earth's atmosphere, USSR		cial meteors-----	11401
studies-----	11110	spacecraft, deployable centrifugally	
upper-----		stabilized structures-----	14782
air data, history and catalogue,		space-probe entry under conditions	
1946-60-----	9881	of high mass loss-----	7558
air density and temperature		spectrographic data from reentries	
measurement by 2 radar-		of Trallblazer IIB-----	14880
tracked falling spheres-----	9533	Trallblazer I reentry physics re-	
chemiluminescence from atomic		search vehicles, description and	
oxygen-nitric oxide, reaction		flight tests-----	11386
under pressure conditions-----	14780	tumbling bodies theory, application	
density, pressure and tempera-		to probe vehicles and Austr-	
ture measure by Redhead and		lian tektites-----	14905
Bayard-Alpert vacuum gages		voice communication system for use	
aboard Explorer XVII-----	7533	in conjunction with radar	
processes, relationship to rapid		tracking equipment-----	16653
pulsations of earth's magnetic		Atmospheric Optics and Actinometry,	
field-----	9359	Interdepartmental Conference	
Project Firefly, 1962-63-----	13630	on, USSR, 5th conference-----	7323
rocket spectrophotometer airglow		Atmospheric pressure :	
measurements in far ultra-		calculation of non-adiabatic pro-	
violet-----	14889	cesses numerical short-range	
ultraviolet spectroscopy-----	14769	pressure forecasting, USSR	
USSR bibliography-----	14926	study-----	20168
USSR research in atmosphericology--	1082	falling sphere measurements-----	16998
Venus, exploration by simple cap-		impact flash at low ambient pres-	
sule-----	14839	ures-----	7548
visual resolution and optical scintil-		Weather Bureau barometric pres-	
lation over snow, ice, and		sure measurements, history-----	13530
frozen ground-----	12344	Atmospheric temperature, monthly	
water vapor content, spectroscopic		normals, decennial census of	
method of integral determina-		U.S. climate-----	18016-25,
tion-----	14919	20877-878, 21919-920	
see also Exosphere—Ionosphere--		see also Temperature.	
Mesosphere -- Stratosphere --		Atmospheric tides, atmospheres of	
Troposphere.		Earth and Mars-----	18722

	Entry
Atomic blasting, producing hydrocarbons from deposits of oil, natural gas, oil shale, tar sands in U.S., potential of nuclear explosives	13110
Atomic bombs:	
explosion, effects on 2 typical 2-story and basement wood-frame houses	131
ichiban, dosimetry program for nuclear bomb survivors of Hiroshima and Nagasaki	15279
fallout and winds	4373
Atomic energy:	
act of 1954, amend—	
hearings	15399
laws	8233, 17253, 17348
reports	6295, 15766
AEC public safety programs	10038
AEC special nuclear materials program, hearings	8235
atomic energy and medical sciences (remarks)	19257
atomic power safety, general information	17068
career opportunities, scientific and technical professions	137
code of Federal regulations	6660
community act of 1955, amendments—	
law	17253
reports	13957, 14078
conditions and limitations on general license provisions of 10 CFR 150.20, rules and regulations	13720
controlled nuclear fusion	13723
cooperation for civil uses, agreement with—	
Argentina	21890
Belgium	3149
China	18986
European Atomic Energy Community	1615
France	20839
India	1617
Ireland	7796
Japan	11642
Viet-Nam	18985
Danish Atomic Energy Commission activities, Apr. 1, 1962-Mar. 31, 1963	19963
direct conversion of energy	11875
end of sacred atomic preserve, atom to become part of mainstream of American public life (remarks)	1785
energy loss of 5.8 Mev alpha particles passing through absorber of variable thickness	8065
equipment for use at La Plata University, agreement with Argentina	7791
field, employment—	
occupational survey 1962	8092
outlook	9439
French—	
nuclear policy and installation, press reports	18325
nuclear power	12761
nuclear research and developments	10861
nuclear strategy, installations, etc	19897
fundamental nuclear energy research, 1963, AEC special report	4307
future energy needs and role of nuclear power (paper)	17066
information, exchange with NATO and member nations, agreement—	
hearings	17440
reports	19457, 19569

	Entry
Atomic energy—Continued	
international program and American industry (remarks)	135
legislation through 88th Congress, 1st session, compilation	4422
literature, bibliographies issued or in progress	124, 4299, 13708, 19247
materials, emission spectrum analysis	5952
nuclear auxiliary power systems—	
evaluation, Jan. 1964	5989
report, 1964	5990
nuclear materials, private ownership—	
hearings	15399
law	17348
reports	15548, 15766
nuclear power—	
desalination of water and simultaneous generation of electric power, USSR (address)	20026
economics, analysis and comments, 1964	19434
nuclear power from radioisotopes	15292
sea water distillation plants	9754
appendices	18936
nuclear theory reference book, 1961-62	10036
peaceful uses—	
Melekes, RSFSR, research center	7221
Tashkent Conference, proceedings	17057, 19225
United Nations International conference—	
participation of U.S. (statement)	19265
summary (address)	19267
Plowshare Program activities in fundamental nuclear energy research, 1963	10037
products, current industrial reports	21028
programs, major activities	8094
properties, transition probabilities, planetary physics expansion method for calculating	16655
research—	
Agricultural Research Laboratory, University of Tennessee, progress report	8067
New Brunswick Laboratory, progress report	5970
safeguards, application to United States reactor facilities, agreement with International Atomic Energy Agency	18984
San Onofre nuclear generating station, site dedication ceremonies (remarks)	19264
SNAP, systems for nuclear auxiliary power—	
literature search	17061
reactors, AEC program, hearings	8235
Soviet nuclear power engineering, information on	5141
studies of sites for nuclear energy facilities (series)— 8753, 12503, 19772	
today and tomorrow (remarks)	17067
understanding the atom series— 136-137, 187, 11875-876, 13723-725, 15292-293, 17068, 19269,	
use of nuclear power for production of fresh water from sea water, hearing	21159
why nuclear power? (remarks)	138
Atomic Energy Agency, International, see International Atomic Energy Agency.	
Atomic Energy Commission:	
AEC raw materials program, hearings	8235



# INDEX 1964

	Entry
Atomic Energy Commission—Con.	
AEC reactor development program, hearings	8235
AEC research and development reports	111-131, 1767-82, 4291-4303, 5950-92, 8046-89, 10023-34, 11851-869, 13689-719, 15278-289, 17057-64, 19223-256, 21012-18.
price list	4324
AEC symposium series	15286
AEC test structures, radiation shielding and response studies	5992
Alr Cleaning Conference, Oak Ridge National Laboratory, Oct. 20-23, 1963, proceedings	8080
appropriations, 1964—	
public works—	
hearings	518
law	1984
reports	343, 510, 4458
supplemental—	
hearing	271
law	269
reports	348, 473
appropriations, 1965—	
authorizing—	
hearings	8235
print additional copies, reports	8424, 12073
law	13882
reports	10212, 10247, 10397
public works—	
hearings	12119, 15796
law	17370
reports	12098, 15767, 17572
arms control and disarmament, research and studies, report	11833
beryllium corrosion, final technical report	5972
Brookhaven National Laboratory, government-owned housing, inadequate rental rates, GAO	10605
cataloging reports, report number series used by Technical Information Division	17059
cost and pricing data not obtained for determining reasonableness of prices for weapons components procured from Aluminum Co. of America, by Bendix Corporation and ACF Industries, Inc., GAO report	21332
engineering materials list, index	8072
financial report, 1964	21019
fundamental nuclear energy research, 1963, special report	4307
fusion research programs	133
Hanford project, exchange public domain lands heretofore withdrawn and reserved, authorize—	
law	17415
reports	15576, 17774
Health and Safety Division, standard health and safety requirements, ID manual	5964
internship and training programs for college graduates	19259
isotope developments	3624
leased automatic data processing system in use at Sandia Laboratory, savings in purchasing, GAO report	10616
liquid-metals corrosion meeting	13155
Nevada Test Site Story	13722
nuclear auxiliary power systems—	
evaluation, Jan. 1964	5989
report, 1964	5990
nuclear materials, private ownership—	
hearings	15399
law	17348
reports	15548, 15766

	Entry
Atomic Energy Commission—Con.	
official values for amount of U-235 isotope in natural uranium	13716
omnibus bills for 1963 and 1964, hearings	12011
Plowshare Program—	
activities in fundamental nuclear energy research, 1963, special report	10037
report, 1963	11873
programs—	
impressions after first year as commissioner (remarks)	11870
major activities	8094
power-reactor development	1788
public safety in atomic energy	10038
Project Dribble, background information	19263
radioactive material shipments, incidents involving, 1962 summary	1778
releases	3370
report, 1963—	
departmental edition	8091
document edition	8047
research and development abstracts, list	3973
research and development in progress, biology and medicine	4301, 13711
research in metallurgy, solid state physics and ceramics, summaries	5984
research in physics and mathematics, summaries	11866
rules and regulations	3272
Savannah River plant site, population status of larger vertebrates	8086
scientific information activities	1515
States and AEC, growing partnership (remarks)	19266
technical information bulletins	4304-6, 8090
telephone directory, Sept. 1964	19268
unwarranted inclusion of tooling costs in price of case extrusion cylinders procured from Wyman-Gordon Co., by Bendix Corp. under cost-type contract, GAO report	10625
zirconium alloy development symposium, proceedings 1962	5961, 10028
Atomic Energy Joint Committee:	
committee prints	1987, 4422, 19434
hearings	271, 1986, 4423, 6188, 8235-36, 10148, 12011, 15399, 17440, 21159.
reports	348, 473, 6295, 6470, 10212, 10397, 13957, 14078, 15548, 15766, 19457, 19569.
Atomic fuel, see Fuel.	
Atomic ordnance:	
Federal item identification guides for supply cataloging	12297
supplements	3478
Atomic power, see Atomic energy.	
Atomic power plants, see Nuclear reactor power plants.	
Atomic reactors, see Reactors (atomic).	
Atomic warfare:	
damage to livestock from radioactive fallout	1734
French military and nuclear developments, press reports	14581
modern, first aid measures, civil defense pamphlet, USSR	20001
national recovery after attack, emergency planning	19645
see also Atomic bombs.	
Atomization, impinging water jets, effect of ambient air velocity	7509

	Entry
<b>Atoms:</b>	
alkali metal atoms on tungsten, adoption of Lennard-Jones atom-atom interaction theory to adsorption-----	18759
density measurements by lumines- cence of solids-----	9530
heat of adsorption, low coverage-----	18758- 759, 18784
humane, radioisotopes at service of medicine (remarks)-----	11871
hydrogen, theory of 2s and 2p ex- citation induced by electron impact-----	13220
interaction of atomic particles with surface of metal-----	8047
international, peaceful uses (re- marks)-----	21020
metallic, adhesion between atom- ically clean surfaces-----	7547
metastable, studies using beam techniques-----	20935
peaceful atom in medicine, USSR study-----	19949
recombination, taken into account in measurement of temperature of free atmosphere-----	14922
understanding the atom series-----	136-137, 1787, 11875-876, 13723-725, 15292-293, 17068, 19269.
use in agriculture-----	136
ATS, <i>see</i> Air Traffic Service.	
ATS fact book-----	8009
ATS manual-----	4266
Attention, <i>see</i> Interest (psychol- ogy)—Vigilance.	
Attention, shock-wave, in elastic-rigid foams-----	5893
Attenuators, light, variable source with million-to-one intensity ratio-----	13186
Attitude control, <i>see</i> Spacecraft.	
Attitude determination for TIROS satellites-----	13219
Attitude instrument flying-----	19215
Attitude sensor study-----	11356
Attix, F. H., thermoluminescent dos- imeters on recoverable satel- lites-----	7652
Attorney General, <i>see</i> Justice Depart- ment.	
Attorney General's Committee on Poverty and Administration of Federal Criminal Justice, report -----	7351
Attorneys, <i>see</i> Lawyers—Public de- fenders.	
Atwater, Calif., population, special census-----	182
Atwood, John L., testimony, hear- ings-----	6526
Auburn-Folsom South unit, <i>see</i> Cen- tral Valley project.	
<b>Auctions:</b>	
livestock, how packers and stock- yards act applies-----	4179
tobacco markets, functions and op- erations, hearing-----	4486
<b>Auditing:</b>	
<b>Federal agencies—</b>	
policy and procedures, GAO guidance manual-----	2398
principles and standards, GAO guidance manual-----	3551
<b>Federally chartered corporations, uniform requirements—</b>	
law-----	17363
report-----	17740
<b>Government corporation control act, amend—</b>	
hearing-----	10814
law-----	17377
reports-----	12064, 17746

	Entry
<b>Auditing—Continued</b>	
management audit for small re- tailers-----	20791
RMA borrowers, accounting rec- ords-----	3122
<i>see also</i> for audit reports, names of corporations, etc.	
<b>Auditors, examination announce- ments-----</b>	207, 8159, 13796, 15350, 21052
<b>Auditory acuity, <i>see</i> Acuity.</b>	
<b>Auditory fatigue, <i>see</i> Fatigue.</b>	
<b>Auditory perception, <i>see</i> Perception.</b>	
<b>Auroras:</b>	
aurorae and airglow, IGY program, articles-----	13262-263, 21778
aurorae and airglow, results of IGY research-----	9621
auroral echoes at 19.4 megacycles per second, study-----	20959
infrasonic waves from auroral zone-----	13216
Ausmus, Standley L., expendable cast- ing molds for reactive metals-----	18692
Austenite, grain growth on electro- slag welding, kinetics-----	10898
Austin, P. L., Medical Department administration-----	2979
Austin, Robert E., lunar mission per- formance evaluation procedure for orbit-launched nuclear ve- hicles-----	11380
Austin County, Tex., transfer from Galveston division to Houston division of southern district of Texas-----	8221
law-----	4528, 6284
<b>Australia:</b>	
aerospace disturbances, research program, agreement-----	7795
cast iron soil pipe, determination of no injury or likelihood thereof to U.S. industry-----	11654
citrus producers and markets-----	765
Educational Foundation and finan- cing of exchange programs, agreement-----	20638
electronic products, market infor- mation-----	21066
foreign trade regulations-----	867
labor conditions-----	13078
lights and fog signals, met changes-----	3074, 13311, 18845
logistical support for UN operations in Korea, agreement-----	11627
north and west coasts, sailing di- rections, change-----	18842
sailing to Australia-----	12557
southeast coast, sailing directions, change-----	7634
spectrometric research, agreement, tektites, application of theory of tumbling bodies entering plane- tary atmospheres-----	20844
tracking stations, agreement-----	14905
trade in beef, veal and mutton, agreement-----	1618
trade mission report, 1964-----	9829
<b>Austria:</b>	
Communist Party, revisionism-----	12557
educational data-----	2661
foreign trade regulations-----	578
labor law and practice-----	14381
market for supermarket, food pro- cessing, and food handling equipment-----	5432
return of property, rights, and in- terests, agreement-----	12560
report-----	10365
text-----	15113
selling in Austria-----	19824
trade mission, report of 1963-----	4864

# INDEX 1964

Authors:	Entry	Automation—Continued	Entry
American, writings, high school course, USAFI study guide---	21248	industrial management, USSR studies-----	12929
employment outlook-----	7379	information processing operations, USSR study-----	6964
index-catalogue of medical and veterinary zoology-----	19057	libraries-----	
L.C. national union catalog, cumulative list-----	3768	conference-----	20452
writer's experience-----	20455	economic feasibility-----	5454
Autoantibodies, specificity in burn sickness, USSR study-----	14473	technical services routines (paper)-----	7967
Autogenous bone transplants in treatment of osseous defects-----	15242	machine building, determination of level of production, USSR study-----	10902
Autoinfection, radiation sickness, failure of antibiotic therapy-----	4939	measuring devices, USSR studies-----	21492
Autolysis, pepsin and trypsin fragments, USSR study-----	7149	mechanizing paperwork, source data automation systems-----	13266
Automated approach to technical information retrieval, library applications-----	15078	methods of adjusting to automation and technological change-----	20734
Automatic data processing equipment, see Electronic data processing systems.		modelling of automatic control systems, USSR study-----	14438
Automatic feeding equipment for livestock and poultry-----	7918	piecewise linear automatic control systems, determination of dynamic processes-----	9622
Automatic machinery, man among machines, USSR study-----	20068	pneumatic, in Soviet technology, USSR study-----	9310
Automatic measurement of coordinates, USSR-----	2752	pneumatic-hydraulic-----	
Automatic plotting of spin-wave instability threshold data-----	19158	new developments, USSR-----	4884
Automatic technology, see Automation.		6th all-Union conference-----	7210
Automatic weather station (grass-hopper)-----	13327	pneumoautomatics, elementary principles, USSR study-----	12907
Automation:		pneumonic jet pneumoautomatics, description, USSR study-----	20275
adjustment of individual to changes (address)-----	11964	predictions regarding automation range far and wide (address)-----	8183
algorithm for use with digital process-control computers for determining time at which blow-out should stop when given carbon content is reached in Bessemer converter-----	16440	programmers of automated instruction, handbook-----	11837
automatic control systems, theory and practice, USSR articles-----	8887	programming-----	
automatic merchandising industry, automation and Library of Congress, survey-----	5682	development of research, USSR study-----	19959
automation and mechanization of metallurgical production, USSR study-----	18583	developments, USSR studies-----	21485
automation and other technological developments, implications, bibliography-----	5436	radiol isotopic methods for automatic control, reports of all-Union conferences-----	19228
automation and productivity, contribution to economic growth program (paper)-----	5425	relationship to productivity and employment, current developments (paper)-----	14713
can cognitive self-learning system determine moment at which tadpole changes into frog? USSR study-----	894	observations-----	9104
challenge (address)-----	14662	source data, equipment guide-----	18801
challenge for future (remarks)-----	11975	systems, modeling of teaching processes, USSR study-----	1024
challenge of change (address)-----	225	technology-----	
continuous furnaces, USSR study-----	14629	East European scientific abstracts-----	21393
data processing, training, services and sources of information, 1964-65, directory-----	19333	USSR scientific abstracts-----	21388
development of apparatus for processing of oceanographic observations, conference, USSR-----	10893	use in lexicography, USSR study-----	8850
digital computers, use of automatic devices in control units-----	9090	USSR-----	
educational methods and techniques, USSR study-----	7252	development of control systems-----	10846
electronic, and programming, USSR studies-----	16044	papers-----	9197
elements in mechanics of investigation of higher nervous activity, USSR study-----	16539	railroads-----	2791
games for automata, USSR study-----	2887	research, popular accounts-----	12996
health and safety aspects of automation and technological change, abstracts-----	7358	see also Optimal processes.	
		Automation of instruction, see Teaching machines.	
		Automation, Technology, and Economic Progress, National Commission on, see National Commission on Technology, Automation, and Economic Progress.	
		Automobile drivers:	
		accidents related to driver on main rural highways-----	20774
		deaf, employability, symposium-----	9871
		State school laws and regulations-----	17924
		Automobile mechanics, see Mechanics (persons).	
		Automobile parts, see Automobiles.	
		Automobile seat belts:	
		increase during year of program efforts-----	13407
		sold or shipped in interstate commerce, meet safety standards-----	
		law-----	1930
		report-----	491

Entry	Entry
Automobile-service station attendants, <i>see</i> Service-station attendants.	Aviation Hall of Fame incorporate—
Automobiles:	law ..... 15389
Armed Forces personnel, military departments methods of shipping to and from Alaska, amend United States Code—	reports ..... 15072
hearings ..... 13989, 17866	Aviation Human Resources Study Board, report on manpower requirements of civil aviation industry, Project Long Look ..... 21292
report ..... 13943	Aviation machinists, mate J 3 & 2, Navy training course ..... 14997
consumer buying intentions ..... 183, 8132, 11907, 17108	Aviation medicine, <i>see</i> Medicine.
Duryea, 1893 ..... 21796	Aviation storekeeper, 3 & 2, Navy training course ..... 14998
exemption of excise tax on rebuilt auto parts—	Aviation structural mechanics, <i>see</i> Mechanics (persons).
law ..... 21145	Aviators:
report ..... 15711	acceptance of all-weather landing systems ..... 11353
ownership by aged persons in U.S., 1962 ..... 20799	flight instructor practical test guide ..... 21321
USSR industrial development, translations ..... 1161, 2706, 5134, 10949, 16160, 16168, 16510	helicopter pilot examination guide ..... 4748
Automotive tires, <i>see</i> Tires.	inflight loss of consciousness, case report ..... 4318
Automotive vehicles, <i>see</i> Motor vehicles.	instrument pilot examination, guide ..... 10582
Autumn olive for wildlife and other conservation uses ..... 7026	instrument pilot flight test, guide ..... 21322
Auxier, J. A.:	memorandum for aviators ..... 3717
general correlative studies, operation Bren ..... 4294	performance during low-altitude, high-speed flight, flight simulator study ..... 7817
Ichiban, dosimetry program for Hiroshima, etc., survivors ..... 15279	pilot evaluation of dynamic stability characteristics of supersonic transport in cruising flight ..... 18764
Auzis, Kaino H., relief ..... 233	pilot performance during extended periods of low-altitude high-speed flight ..... 14776
Avena, morphologic characters, inheritance ..... 16074	pilot transition courses for complex single-engine and light twin-engine airplanes ..... 12428
Avery, Ivan F.:	piloted motion simulator investigation of VTOL height control requirements ..... 18777
carbon black ..... 20468	piloting performance during boost of X-15 to high altitude ..... 11412
natural gas ..... 21707	pilots—
natural gas liquids ..... 21708	and flight instructors, certification, Federal aviation regulations ..... 650, 10511, 17967, 19073
Avery, James P., crash impact configurations in steel tube and fabric aircraft ..... 16893	excretion with urine of 17-hydroxycorticosteroids and 5-hydroxyindoleacetic acid, USSR study ..... 8881
Aviation, <i>see</i> Aeronautics—Aircraft.	flight evaluation of wide-angle, overlapping monoculars for providing pilot's field of vision—human transfer functions, measurements with various model forms ..... 16705
Aviation accidents, <i>see</i> Aircraft accidents.	measured transfer functions during 2-axis tasks with motion—performance, effects of high sustained acceleration ..... 14843
Aviation boatswain's mates:	private and commercial pilots refresher courses ..... 18032
E 1 & C, Navy training course ..... 13314	private pilot, training guide ..... 19742
H 1 & C, Navy training course ..... 16785	private pilot's handbook of aeronautical knowledge ..... 6732
Aviation cadets, class of 1964, predicting 1st year achievement ..... 19163	standard flying sense ..... 10605
Aviation electrician's mate 1 & C, Navy training course ..... 5580	student pilot guide ..... 15932
Aviation engineering, <i>see</i> Aeronautical engineering.	<i>see also</i> Notice to aviators.
Aviation fields:	Aviation charts, <i>see</i> Maps and charts.
Army, operational and maintenance facilities, engineering and design manual ..... 21279	Avocados, Florida, seasonal changes ..... 19104
equipment for Marine Corps tactical airfields, procurement—	Avoyelles Parish, La., food stamp program impact on retail sales ..... 12309
hearing ..... 8383	Avtomaticheskaya svarka (periodical):
report ..... 21187	translations ..... 2860
lighting, Navy design manual, changes ..... 3198	Awards (arbitration):
pavements—	National Railroad Adjustment Board
and drainage, design, general provisions, engineering manual ..... 15872	7615-17, 9663, 11473-474, 14982-986, 20666, 21809-810
flexible, engineering and design manual, change ..... 12350	Awards (incentive), <i>see</i> Rewards (prizes, etc.).
minimum horizontal dimensions for infinite slab behavior determination, model study ..... 17950	Axial flow, <i>see</i> Flow.
Navy design manual ..... 3199, 20891	
rigid engineering and design manual, change ..... 12351	
rigid, overlay test tracks, Sharonville, Ohio ..... 4670	
rigid, prestressed, repetitive loading model tests ..... 12352	
soil compaction investigation, graded crushed-aggregate base course ..... 641	
Aviation fuels, <i>see</i> Gasoline.	



# INDEX 1964

	Entry		Entry
Axial-load fatigue properties of PH 15-7 Mo stainless steel in condition TH 1050 at ambient temperature and 500° F-----	14887	Back Bay National Wildlife Refuge, birds, list-----	8607
Axial transverse encephalography, new concept in pneumoencephalographic interpretation-----	5553	Backfills, <i>see</i> Hydraulic mine filling.	
Axlrod, Stephen H., Federal reserve security transactions-----	15903	Backward recurrence method for computing regular Beasel function-----	9577
Ayers, Louise R., education directory, 1963-64, pt. 2, public school systems, including supplement on church-related schools-----	15841	Bacteria and bacteriology: antibacterial preparations, 5-nitro-furan derivatives, USSR studies-----	21586
Ayo visits USA-----	1645	bacteria collectors effectiveness in determining bacterial aerosol concentration, USSR study-----	7059
Ayrshire cattle, <i>see</i> Cattle-----		bacteria of layer waters, oils and rocks of oil deposits in USSR-----	2589
Azeotropic method of obtaining fish meal, USSR-----	7246	bacterial invasion of human gingival tissues, simulation with carbon particles-----	8000
Azerbaijdzhan Soviet Socialist Republic: Bozdag Mountain Ridge area, autumn-winter migration of red-tailed gerbils and their fleas, study-----	12969	bacterial kidney disease of salmonid fishes-----	10567
exploratory well, USSR study-----	5344	bacterial self-decontamination of soil in far north, USSR study-----	12939
medical specialists, congress, USSR report-----	11094	bactericidal effect of some lactones and lactams, USSR articles-----	10845
Azimuth, long line, from optical observations of ANNA flashing satellite-----	19150	blood clearance of bacteria in mice, effect of low temperature exposure-----	4244
Azimuthal magnetic field of thick, finite-length, helical solenoid-----	14895	culture media for Trypanosoma cruzi, use of hemin and hemoglobin, USSR study-----	2477
Azov, Sea of, lights and fog signals, list-----	5578, 16780, 21814	food examination for enteropathogens and indicators, manual-----	13396
Azov and Black Sea Research Institute of Marine Fisheries and Oceanography, Indian Ocean Expedition, work summary-----	7170	genetics in bacteria, USSR studies-----	10979
Azovskoye More, <i>see</i> Azov, Sea of.		leaching copper sulfide minerals with autotrophic bacteria-----	11329
Aztec Ruins National Monument, general information-----	14963	microflora of gamma-irradiated products, USSR study-----	10807
<b>B</b>			
B.D.S.A., <i>see</i> Business and Defense Services Administration.		oral and intestinal bacteria interchange between individuals in 2-man space cabin simulator, studies-----	11806
B-58A, <i>see</i> Airplanes.		pathogenic bacteria in endogenous medium, detection, USSR study-----	20219
Babcock, Clarence O.: calcium and calcium compounds-----	14733	photosynthesizing bacteria, USSR study-----	10939
strontium-----	14765	role of bacteria in process of electrochemical steel corrosion in sea water, USSR study-----	2636
sulfur and pyrites-----	20514	strontium 89 effect on microflora of biological filters, USSR study-----	9177
sulfur in 1963-----	14766	temperature dependence of luminescent bacterioluminescence and its state in photosynthetic bacteria, USSR study-----	5368
preliminary report-----	5497	Bacterial warfare, protection of grain products from radioactive, chemical, and bacterial substances discussed, USSR study-----	14591
Babies, <i>see</i> Infants.		Badenhoop, Louis E., salary structure characteristics in large firms, 1963-----	16612
Babington, Wallace K., mental retardation program of Health, Education, and Welfare Dept., 1965-----	10666	Badge of honor, <i>see</i> Decorations of honor.	
Babitzke, Herbert R., columbium and tantalum alloys suitable for use at high temperatures-----	7461	Badger Wash Basin, grazed and ungrazed watersheds, hydrologic and biotic characteristics, 1953-58-----	4804
Baby, <i>see</i> Infants.		Baffin Bay, sailing directions, change-----	9673
Baby carriers, plastic, from Japan, determination of no injury to U.S. industry-----	20849	Baffles, spherical, concentric, acoustic pressure distribution, formulas-----	18859
Babylon, N.Y.: hydrology of area-----	18147	Bagby, Robert H., relief-----	1906, 2171
population, special census-----	15319	Baggage: Armed Forces members, advance return-----	17866
Bacchus Works, Hercules Powder Co., unnecessary cost to Government through leasing electronic data processing systems by Defense Dept., GAO report-----	19763	hearing-----	17290
Bacharach Industrial Instrument Co., President's E award for excellence in exporting (remarks)-----	17159	law-----	15740
Bachelor's degrees, <i>see</i> Degrees (colleges and universities).		report-----	
Bachmann, Joyce C., investment factors in Republic of Korea-----	14382	luggage, briefcases, and personal leather goods, current industrial reports-----	3390
Bacigalupi, Robert J. surface topography of single crystals of face-centered-cubic, body-centered-cubic, sodium chloride, diamond and zinc-blende structures-----	11404	Baggett Transportation Co., accident-----	14405
		Bags, burlap and multiwall paper, for handling and storing pea beans-----	7834

# JANUARY-DECEMBER

Entry	Entry
Bagworm moths, <i>see</i> Moths.	Bakersfield, Calif., consumer expenditures and income, 1961----- 9381
Bahama Islands:	Bakery products:
Atlantic undersea test and evaluation center, establishment, agreement with United Kingdom----- 1612	bibliography----- 5679
economy, basic data----- 15983	commercial, freezing, current practices, problems, and prospects. 19086
new theory identifying locale of Columbus's light, landfall, and landing----- 20794	Baking, <i>see</i> names of foods baked.
Balkal, Russian SFSR registration of Pa waves in region----- 9045	Balambo Tribe, Congo (Leopoldville), cult of the dead----- 16307
Bailey, Edgar H., geology and quicksilver deposits of New Almaden District, Santa Clara County, Calif.----- 8765	Balance (meteorology), <i>see</i> Meteorology.
Bailey, F. C., acceleration data----- 7729	Balance of payments:
Bailey, G. C., in-pile Hall coefficient and conductivity measurements on zone-refined P-type silicon----- 5591	adjustment and international liquidity (remarks)----- 8175
Bailey Reservoir, <i>see</i> R. D. Bailey Reservoir.	balance of payments and discriminatory ocean freight rates, hearings----- 6190, 10149, 19435
Bainbridge (U.S.S.):	deficits, eliminating in 1964 (remarks)----- 7823
overpricing, nuclear frigate purchased from Bethlehem Steel Company, Navy Dept., GAO report----- 8731	dollar problem, factfinding trip to England, France, Switzerland, and Italy, report----- 10412
Baird, W. P., ornamental hedges for northern Great Plains----- 25	interest equalization tax on foreign securities, impose-----
Bait, fish, collection, care, preparation, and propagation----- 6713	digest of testimony, etc----- 10348
Baja California, plankton grid studies, Apr. 1952----- 4740	hearings----- 14134
Baker, C. H., fluid engine power systems----- 5978	law----- 17421
Baker, Chrisoula, relief----- 15454, 17220	reports----- 2075, 6302, 15724
Baker, Dorothy C., mineral trade notes, monthly inventory----- 3727	International accounts, and how they affect our economy, explanation----- 15371
Baker, Helen R., ionospheric perturbations, solar flares, and geomagnetic storms, correlations observed by oblique long-range high-frequency probing----- 16995	International monetary system, functioning and possible reform, hearings----- 4424
Baker, Howard H., memorial services----- 19368	money flows and balance of payments adjustment (remarks)----- 20861
Baker, James D., short-term memory, non-equivalence of query and message items----- 9981	perspectives and policies----- 272
Baker, John A.:	United States:
addresses-----	deficit, reduce by promoting increased foreign investment in corporate securities and increased foreign financing for U.S. corporations abroad----- 11538
Oct. 14-18, 1963----- 1719	1961-63----- 685
Oct. 29, 1963----- 1718	policies (remarks)----- 13503
Nov. 1, 1963----- 5806	questions and answers----- 20819
Nov. 8, 1963----- 5805	report----- 8414
Nov. 18, 1963----- 5804	use of reserved foreign currencies in lieu of dollars, report----- 6482
Nov. 21, 1963----- 5803	Balance sheets, <i>see</i> Finance.
July 7, 1964----- 16942	Balancing beam, permits safe, easy load handling under overhang----- 9561
geology and ground-water conditions in Wilmington-Reading area, Mass----- 18141	Bald Knob quadrangle, Wash., geology----- 18108
ground-water resources of Lowell area, Mass----- 10657	Baldanza, Nicholas T., plastics for tooling----- 12305
Baker, P. S., isotopes and radiation technology, review of recent developments----- 3625	Balderston, C. Canby:
Baker, R. C., natural sources of salinity in Brazos River, Tex----- 19793	remarks-----
Baker, Ralph C., northern fur seal----- 8600	Feb. 13, 1964----- 6688
Baker, Robert G.:	Sept. 15, 1964----- 17989
financial and business interests, investigation-----	Sept. 28, 1964----- 19705
hearings----- 4594, 14156	Balderston, J. Michael, application of integrated circuits to telemetry systems----- 14838
report----- 14104	Baldwin, Helene L., primer on ground water----- 803
testimony hearings----- 8456	Baldwin, J. L., weekly weather and crop bulletin, national summary----- 4153
Baker, Roger C., ground-water resources of lower Rio Grande Valley area, Tex----- 14348	Balke, Bruno, work capacity as related to chronological and physiological aging----- 5995
Bakeries, <i>see</i> Bakers and bakeries.	determination of plastic limit----- 8508
Bakers and bakeries:	Ball, George W.:
baking industries, review of 1963, outlook for 1964----- 6007, 15299	address, Sept. 18, 1964----- 20985
employment outlook, baking industry----- 9440	U.S. policy toward Cuba----- 11621
	Ball bearings, <i>see</i> Bearings (machinery).
	Ballard, G. E. H., operator variance in determination of plastic limit----- 8508
	Ballasts (electric):
	lamp fluorescent, current industrial reports----- 6043
	Ballinger, Roy A., sweeteners used by food processing industries----- 4613
	Ballistic missiles, <i>see</i> Missiles.

# INDEX 1964

	Entry
Ballistics, interior, design for protection, engineering design handbook, AMC pamphlet	19202
Ballistocardiography, <i>see</i> Kinetocardiography.	
Balloons:	
manned free airworthiness requirements, Federal aviation regulations	15883
method for determining directivity of antenna systems	5504
moored, Federal aviation regulations	6619
Ballou, Doyle A., relief	6160, 6405
Baltic Sea:	
commercial fish stocks, USSR study	7171
lights and fog signals, list, changes	13312, 16781, 21817
sailing directions, change	16775
Baltimore, Md.:	
occupational wage survey	7413
principal electric facilities, map	673
water resources of area	8775
Balzhiser, Richard E., literature survey on liquid metal boiling	46
Banach spaces, <i>see</i> Topology.	
Bandelier National Monument general information	9654
Bands, paper, imported, marking requirements, report	10264
Bands (music):	
United States Air Force Band, America's musical ambassadors	15244
Bang disease, <i>see</i> Brucellosis.	
Bankers, views on East-West trade, compilation, print additional copies, report	19573
Banking, <i>see</i> Banks and banking.	
Banking and Currency Committee, House:	
calendar	3645
committee prints	8372, 21202-204
hearings	392-393, 2107-9, 4490-91, 6346, 8368-71, 10300-302, 13996, 15584, 117643-644, 19499.
investigations and studies—	
expenses, report	373
housing, expenses, report	12072
reports	2040, 2042, 2055, 2067, 2094, 2096-97, 4460, 4464-67, 8339, 10254, 10268, 12076, 12091-92, 15535, 15549, 17570.
subcommittee prints	2106, 10301, 13997, 15585
Banking and Currency Committee, Senate:	
calendar	3664
committee prints	2234, 10412, 14129, 14131, 17872
hearings	524-526, 2231-33, 4573-74, 6497-98, 8438-39, 19411, 12253-255, 14128, 14130, 15801-803, 17870-871, 19593.
investigations and studies—	
authorization, report	4553
authorizing expenditures, report	4540
housing, public and private—	
authorization, report	4554
expenses, report	4541
reports	457-458, 460-461, 466-467, 485, 4540-41, 4550, 6482, 12226-227, 14058-60, 15695-697, 15706, 15723, 19567, 19571.
summary of activities, 88th Congress, 1st session	4575
Bankruptcy:	
act, amend, law	255
act, amend rel. to statutory liens and powers of trustee, report	14079

	Entry
Bankruptcy—Continued	
act, rules of practice and procedure—	
law	19431
report	19559
statistical tables, 1963	5781
taxes, limiting priority and nondischargeability, report	14080
Banks, Vera J., migration of farm people, bibliography 1946-60	38
Banks and banking:	
applications received, or acted on by Federal Reserve System Board of Governors	3259
assets and liabilities, all banks—	
semiannual report	4714, 10542
semi-monthly report	3268
United States and other areas	21311
assets and liabilities, and capital accounts, commercial and mutual savings banks	654, 10518
bank credit and money, 1963	6685
bank debits and deposit turnover	3274
bank holding company legislation, hearings	19499
bank mergers, Federal and State laws, compilation	4715
banking and monetary statistics, 1963	12403
borrowing short and lending long (remarks)	19705
code of Federal regulations	6661
commercial, Treasury Department tax and loan accounts, establish more equitable arrangement with Federal Government, GAO report	4760
comparative regulations of financial institutions, subcommittee print	2106
consolidated condition statement	3268
consumer installment credit, monthly report	3361
crimes against banking institutions—	
hearing	2113
report	6291
debts to demand deposit accounts, etc., 1963	6686
deposits of country banks	3418
engaging in business of personal property leasing, prohibit, hearings	10302
Federal bank supervision, real and ideal (remarks)	8586
Federal deposit insurance act, amend—	
hearings	19499
reports	4465, 10281
Federal reserve par list	21313
cumulative supplements	3492
Federal savings bank bill, staff analysis	21203
foreign assets control regulations—	
commodity supplement	13500
holding company act of 1956, amend, hearings	19499
increased flexibility for financial institutions, hearings	6346
insured banks—	
deposit insurance, increase maximum coverage for each depositor, reports	4465, 10281
notice of change in control of management—	
hearing	17644
law	19401
report	17570
offices insured by FDIC, list—	
changes	3684
reports	8542, 19681
loans for purchasing or carrying registered stocks, regulations	683
mutual deposit guarantee corporation, tax exemption, hearing	15805

# JANUARY-DECEMBER

	Entry		Entry
Banks and banking—Continued		Bark canoes, <i>see</i> Canoes and canoeing.	
mutual savings banks, Federal		Barker, F. B., determination of radium in water	14349
charter legislation, hearings	2108	Barker, L. Keith, thrust-vector technique during manual control of lunar landings	14853
national banking review	3762	Barley, stem rust spread by barberry bushes	9958
Negroes, banking and community development (address)	21064	Barnes, Burton V., self- and cross-pollination of western white pine, comparison of height growth of progeny	18065
nonmember banks that maintain clearing accounts with Federal reserve banks	4051, 4719	Barnes, Ivan: field measurement of alkalinity and pH	4805
occupations, employment outlook	9441	geochemistry of ground water in mine drainage problems	2423
performing nonbanking services, prohibit, hearings	10302	mine waters in northern anthracite field, Pa	6810
reports, window dressing—		Barnett, R. L., prestressed monolithic and segmented brittle structures	21728
hearings	402	Barney, Richard J.: calculating national fire-danger rating spread index by computer	12456
report	357	fuel moisture, guide for evaluating severity of fire seasons	12455
savings accounts, investments of individuals	3618, 8546	Baroch, C. J., design and fabrication of fuel rods with stainless-steel lined zircaloy-2	13695
Soviet Union ascribes to new international rules for documentary credit letters	20105	Baroch, Charles T.: thorium	18710
Treasury tax and loan account balances, list of banks holding	10299	uranium	18712
years of reform, prelude to progress	21101	Barometric pressure, <i>see</i> Atmospheric pressure.	
<i>see also</i> Banks for cooperatives—		Barometry, manual	5759
Federal home loan banks—National banks— <i>also</i> headings beginning Federal reserve.		Baron, F. J., seedbed density and pine seedling grades in California nurseries	8667
Banks for cooperatives:		Barr, Joseph W., nomination, hearing	4574
patronage refunds, pay part in money instead of class C stock—		Barracks and quarters, troop housing, Navy design manual, changes	3204
law	17387	Barrels, steel shipping, current industrial reports	3390, 8120
reports	10239, 17771	Barrer, Lester A.: current data from epidemiological follow-up of New Jersey radium cases	11862
Banks Lake:		epidemiological follow-up of New Jersey radium cases	11863
costs for recreational purposes to be nonreimbursable—		Barrett, Ashton C., remarks, May 22, 1964	12390
hearing	10424	Barrett, James W., dominant ponderosa pines do respond to thinning	8658
report	6488	Barrett, Robert E., statistical techniques for describing localized vibratory environments of rocket vehicles	14847
Banning, Lloyd H., melting pyrophoric hydrogen-reduced iron powder for production of steel	9522	Barrier equipment, <i>see</i> Arresting gear.	
Bar, <i>see</i> Lawyers.		Barro Colorado Island, phytophysiological reconnaissance	8130
Barambo, <i>see</i> Balambo Tribe.		Barrood, Denise H., relief	14040, 17484
Barany, Ronald:		Bars (metal, etc.): Federal item identification guides for supply cataloging	12292
heat and free energy of formation of muscovite	7436	supplements	3473
thermodynamic properties of cuprous and cupric ferrites	18696	hot-rolled rail steel bars, produced from tee-section rails, standard of trade	5540
Baratta, Edmond J., environmental surveillance laboratory for radionuclide analyses	21847	<i>see also</i> names of metals, etc. of which bars are made.	
Barbados, economy, basic data	15987	Bartholomew, C. A., broadband linear array for space surveillance	16500
Barber, Mildred S., training of workers in American industry	11817	Bartko, Frank, TIROS low resolution radiometer	20369
Barberry, bushes spread stem rust to wheat, etc	9958	Bartlett, Eugene P., graphite ablation rates, etc., during re-entry	9974
Barbers, employment outlook	9414	Bartlett, Margaret P., relief	443, 1890
Barber's Point, Hawaii, <i>see</i> Naval Air Station, Barber's Point.		Bartley, Robert T., remarks, Nov. 11, 1963	2312
Barbiere, Robert E., electronic designer's shock and vibration guide for airborne applications	1750		
Barduhn, Allen J., further properties of hydrates and hydrating agents	8800		
Barendsen, Robert D., half-work, half-study schools in Communist China	10464		
Barger, Raymond L., effects of flight path and atmospheric variations on boom propagated from supersonic aircraft	7562		
Barger, Ronald L., specific gravity of Arizona Gambel oak	14325		
Bargeski, Albert M., oceanographic vessels of the world	9672		
Barham, Richard W., market factors in Iran	8811		
Barite:			
flotation of barite-fluorspar ore from Tennessee	16641		
minerals yearbook chapter	18658		
Barium, films, vacuum performance of ball bearings lubricated with	13232		

Do not order from index; see indicated entry

Page 121



# INDEX 1964

	Entry		Entry
Bartolo, Calif., railroad accident.....	10717	Bauman, Alvin:	
Barton, Manes:		employee earnings.....	
fall water supply summary for Nevada.....	20802	miscellaneous retail stores, June 1962 retail stores and proprietary stores.....	14693
water supply outlook and Federal-State-Private cooperative snow surveys for Nevada.....	4141	retail apparel, etc., stores.....	13059
Barton, William R.:		retail automotive dealers and in gasoline service stations.....	11275
cement.....	20469	retail building materials, hardware, and farm equipment dealers.....	7398
gypsum.....	18667	retail food stores, 1962.....	9456
Basic and Applied Sciences Branch, activities report, 1964.....	18891	retail furniture, home furnishings, and household appliance stores, June 1962.....	13060
Basic music, Navy training course.....	20680	retail general merchandise stores.....	9455
Basommatophora Ripley, Owl Creek, and Prairie Bluff formations.....	18125	retail trade, June 1962.....	1376
Bastnaesite, metathesis, and solvent extraction of cerium.....	7457	Baumgartner, D. J.:	
Bataeus, <i>see</i> Shrimps.		color removal from surface waters by—	
Bateman, Paul C., Sierra Nevada batholith.....	810	carbon filter.....	4242
Batesville, Ark., manganese resources of district, field investigations, July 1956-June 1961.....	14760	hypochlorite.....	20956
Batholiths, Sierra Nevada, recent work across central part.....	810	determining pollution of surface waters by eggs of <i>Echinococcus</i> .....	19147
<i>see also</i> Coast Range batholith.		treatment of undiluted human waste by activated sludge process.....	19146
Bathrooms, planning for today's homes.....	20921	Bauxite:	
Baton Rouge, La.:		minerals yearbook chapter.....	20467
consumer expenditures and income, 1961.....	7372	ore, etc., provide suspension of import duty—	
wholesale food-distribution facilities, status report.....	11737	law.....	13910
Batt, William L., Jr.:		reports.....	8315, 12243
addresses, etc.....		report, quarterly.....	3276
Feb. 23, 1964.....	5926	Bay, Roger R.:	
Feb. 25, 1964.....	5933	soil moisture and radial increment in 2 density levels of red pine.....	777
Mar. 1, 1964.....	5932	soil moisture trends in thinned red pine stands in northern Minnesota.....	776
Mar. 2, 1964.....	5931		
Mar. 12, 1964.....	8014	Bay-Head-Manasquan Canal:	
May 26, 1964.....	11819	change name to Point Pleasant Canal—	
Batteries, <i>see</i> Electric batteries—		law.....	21140
Space batteries.		reports.....	17754, 19469
Battison, Edwin A., screw-thread cutting by master-screw method since 1480.....	20654	Bay Kow Jung, <i>see</i> Jung, Bay Kow.	
Battle act, <i>see</i> Exports.		Bayard-Alpert ionization gages, <i>see</i> ionization gages.	
Battle of Lake Erie Sesquicentennial Celebration Commission, establish, law.....	13878	Bayesian learning processes, <i>see</i> Decision-making.	
Battle of New Orleans Sesquicentennial Celebration Commission:		Bayous, <i>see</i> names of bayous.	
appropriation, authorization—		Bayroff, A. G., methods for improving enlisted input.....	15277
law.....	19399	Bays, <i>see</i> names of bays.	
report.....	15747	BDSA, <i>see</i> Business and Defense Services Administration.	
Battlefields, <i>see</i> names of battles or battlefields.		BDSA export potential study (series).....	144
Battles, <i>see</i> names of battles or places where fought.		Beach erosion, <i>see</i> names of localities.	
Batzner, Harold O., forest tent caterpillar.....	12433	Beach Erosion Board:	
Bauer, Donald J.:		abolish, law.....	252
metathesis of bastnaesite and solvent extraction of cerium.....	7457	bulletin.....	8586
napthenic acid solvent extraction of rare-earth sulfates.....	9513	Beaches, natural, sand transport by wind, calculation procedure.....	12337
Bauer, Helmut F., fluid oscillations in containers of space vehicle and their influence upon stability.....	7560	Beacons:	
Bauer, Josephine:		CW, using Doppler tracking method, experimental results.....	9585
English as communication skill.....	557	flashing experiment for Mercury-Agena 9 (MA-9) mission.....	16694
exercise book.....	10443	Beam, Richard M., liquid layer of uniform thickness spread over rigid circular cylinder subjected to lateral accelerations.....	18776
teacher's guide and key for introductory social studies and English as communication skill.....	8462	Beams:	
Bauer, S. J., rocket payload for ionospheric studies.....	13240	prestressed laminated wood, comparison, etc.....	8672
Bauernschub, John P., Jr., boom for placing scientific experiment 25 ft. from spacecraft.....	5505	techniques for studying metastable atoms and molecules.....	20935
Baum, E. A., molybdenum emitter thermionic power converter.....	5869	<i>see also</i> Balancing beams—Electron beams—Ion beams.	
Baum jigs, <i>see</i> Jigs (mining).		Beams—dry, foreign trade prospects.....	8629
		foreign agriculture circulars.....	3520

# JANUARY-DECEMBER

	Entry		Entry
Beans—Continued		Becraft, George E., geology and mineral deposits, Jefferson City quadrangle, Mont.	4793
pea, burlap and multiwall paper bags for handling and storing— <i>see also</i> Soybeans.	7884	Bed disability among chronically limited, United States, July 1957-June 1961.	18925
Bearings (machinery):		Bed springs, <i>see</i> Bedsprings.	
ball-bearing steel, new casting method, USSR study.	2758	Bedding, current industrial reports.	162
bearing transmits rotary and axial motion.	20556	Bedford, Mass., solar eclipse, July 20, 1963, ionospheric observations.	7964
bibliography.	9849	Bedinger, M. S.: ground water in lower Arkansas River Valley, Ark.	8780
crystallized glass ceramic, rolling-contact fatigue process.	3030	ground-water potential of alluvium of Arkansas River between Little Rock and Fort Smith.	823
Federal item identification guides for supply cataloging.	12289	Bedini, Silvio A.: Borghesi astronomical clock.	21797
supplements.	3470	Early American scientific instruments and their makers.	16758
gas-lubricated, elastic orifice automatically regulates.	14800	Bedrock: geology of— Salem quadrangle and vicinity, Mass.	10631
gold plated miniature ball bearings with various retainer materials and configurations, high speed vacuum performance.	1478	Tiverton quadrangle, R.I.—Mass.	15942
high speed vacuum performance of miniature ball bearings lubricated with combinations of barium, gold, and silver films.	13232	Wickford quadrangle, R.I.— valleys of New England coast as related to fluctuations of sea level.	10630 19787
high-temperature, research.	50	<i>see also</i> Rocks.	
modified gas bearing, adjustable to optimum stiffness ratio.	20551	Beds, <i>see</i> Bedsprings.	
pneumatic power transmitted through air bearing.	16674	Bedsprings, current industrial reports.	3390
surface failure of titanium carbide cermet and silicon carbide balls in rolling contact at temperatures to 2000° F.	18783	Beef:	
technology, advanced.	7477	beef and products, industry, investigation under sec. 332 of tariff act.	15133
Bearpaw Mountains, geology of Cleveland quadrangle, Mont.	18104	canned, in family meals.	7885
Beas, Robert J., relief.	17493	carcass evaluation service.	4185
Beaumont, Tex., occupational wage survey.	18630	freeze-dehydrated beefsteaks, evaluation for Navy use.	11652
Beauty operators, employment outlook.	9414	imports, restrict— hearings.	10418, 14135
Beaver County, Pa., coal resources.	2417	reports.	14098, 16544, 21194
physical environment and strip-mining operations in basin.	4792	trade agreement with— Australia.	9829
strip mining influences on hydrologic environment of basin.	10643	Ireland.	9830
Beavers mountain, review of literature.	10578	Mexico.	15120
Beaufort, S.C., <i>see</i> Marine Corps Air Station, Beaufort.		New Zealand.	9831
Beck, Donald E., cubic-foot volume tables for yellow-poplar in southern Appalachians.	8669	Beef cattle, <i>see</i> Cattle.	
Beck, Harold L., environmental radiation measurements in southeastern, central, and western United States, 1962-63.	21012	Beehler, Cecil C., oxygen and the eye.	11805
Beck, Helen L., closed short-term group, treatment adjunct for parents of mentally retarded children.	18776	Beer:	
Beck, William A., loading, etc., at zinc-lead mines Eagle-Picher Co.	5477	concentrate, tax treatment, amendments to internal revenue code, hearing.	417
Becker, Robert J., relief.	15476	excise taxes, code of Federal regulations.	8807
Becker, Robert M., probability distributions with reference to mineral industries.	9498	imported, refund of taxes on exportation— law.	17398
Beckers, J. M., fine structures in solar chromosphere.	20961	reports.	8317, 15702
Beckman, Robert T., compressive strength versus length-diameter ratios of potash specimens.	5486	Bees:	
Beckwith, Ivan E., heat transfer and pressures on swept cylinder in vicinity of its intersection with wedge, etc.	16678	honey bee colony, shade and water.	15210
Beckwith, W. Boynton, analysis of severe weather factor in automatic control of air route traffic.	11702	USSR biological studies.	16409
Becoming a citizen series.	12535-536, 14360, 18157	Beesley, Thomas E., soil survey report, Gage County, Nebr.	16866
		Beetles:	
		Alticinae (Coleoptera) from West Indies, notes on new and old species.	7598
		elm bark, general information.	1702
		elm leaf, general information.	13584
		flour, laboratory evaluation of compounds as repellents to Tribolium spp.	5832
		western pine, survey of damage on Fremont National Forest.	2395
		white-pine cone, description, control, etc.	18043
		watch for cereal leaf beetle.	5843
		Beets, table, growing.	5829

# INDEX 1964

	Entry		Entry
Begley, James, inspection of thick polyethylene sections, by radiography and fluoroscopy	13369	Bending brakes, <i>see</i> Metalforming brakes.	
Behavior:		Bending moments, <i>see</i> Moments.	
antisocial, of minor in United States, statistical aspects	13783	Bending tests of large-diameter stiffened cylinders susceptible to general instability	9589
Army enlisted men with disciplinary records, combat performance	21006	Bendix Corporation, unwarranted inclusion of tooling costs in price of case extrusion cylinders procured from Wyman-Gordon Corp. under AEC cost-type contract, GAO report	10625
astronauts, confinement, 7-day testing	3010	Benedict, Md., concrete block revetment	12336
information processing task	3011	Beneficiating low-grade chromites from Stillwater complex, Mont.	13124
human, optimal strategies in fungus-eater game 4	11798	Benefit series service, unemployment insurance	3278
insects—		Benert, Robert, penetration of shaped charges into frozen ground	8516
basic semiconductor circuitry for behavioral studies	15195	Bengal, Bay of, sailing directions, change	20673
influence of larval nutrition on behavior, USSR study	2662	Bengási, Libya, ground water resources of area	6823
mentally retarded, report of President's Panel	15029	Benitez, Jose A., testimony, hearings	6526
science, logical analysis of structure and function	7989	Benjamin, C. R., micro-organisms, what they are, where they grow, what they do	9955
<i>see also</i> Conduct of life.		Benjamin, Jesse:—	
Behrmann, R. M., horizontal dimensions for infinite slab behavior	17950	occupational wage survey—	
Belcher, Louise, Ayo visits USA	1645	Albany-Schenectady-Troy, N.Y.	14695
Belen, Frederick C.:—		Baltimore, Md.	7413
address, Apr. 6, 1964	9696	Washington, D.C.-Md.-Va.	7406
nomination, hearing	6524	Bennett, Charles E., testimony, hearings	12281
Belgium:		Bennett, Charles F., Jr., phytophysiological reconnaissance of Barro Colorado Island, Canal Zone	3130
American military cemeteries, agreement	3150	Bennett, Donald R., EEG in aircrew and astronaut selection	7998
atomic energy cooperation for civil uses, agreement	3149	Bennett, Floyd V., powered-descent trajectories for manned lunar landings	18756
economy, basic data	8822	Bennett, James/V., of prisons and justice	12166
education, exchange program financing, agreement	11644	Bennett, O. L., cotton irrigation in southeastern United States	11753
extradition convention, supplementary	14027	Bennett, Robert M.:—	
foreign trade regulations	8830	interstate hauling of California-Arizona fresh fruits and vegetables by rail and truck	16959
friendship, establishment and navigation treaty	1605	propeller whirl flutter of power plant on flexible wing	18744
gasification patents, index	18660	Benson, M. A., floods in Southwest	12515
maritime matters, use of ports and waters by N.S. Savannah, agreement	5699	Bentall, Ray:	
mutual defense assistance, administrative expenses, agreement	11635	methods of collecting and interpreting ground-water data	2425
Bellis, David I., testimony, hearings	2244	methods of determining permeability, transmissibility and drawdown	2424
Bell, Elbert L., soil survey, Logan County, Kans.	20805	shortcuts and special problems in aquifer tests	4806
Bell, Gordon C., defense against chemical agents	1395	Benthophagous fish, <i>see</i> Fish and fisheries.	
Bell, Winifred, demonstration projects in public assistance	15165	Benthos:	
Bellona, N.Y., railroad accident	875	ecology of benthonic species	14342
Bellow, Saul, lecture, Jan. 27, 1964	20455	effect of benthonic fauna on fish supplies, USSR study	16493
Belis Canyon, Wasatch Mountains, Utah, glaciation	15950	Bentley, N. M., claim	12031
Bell's palsy, <i>see</i> Facial paralysis.		Benzene, mesidine, toxicology, USSR study	1054
Belly, Pierre-Yves, sand movement by winds	6587	Benzie, John W., test of concentrated silvicesides on sugar maple	6748
Belmont County, Ohio, area redevelopment manpower report	17935	Benzie acid, pharmacology of new derivatives, East German study	12851
Belmont quadrangle, Wis., geology	18103	Benzol, <i>see</i> Benzene.	
Belo Horizonte quadrangle, Brazil, geology	10638	Benzylaminopurine, quality and respiration rates in stock flowers treated	13560
Belorussian Soviet Socialist Republic, medical workers, trade union conference	1094	Bequests, <i>see</i> Inheritance and succession.	
Belt series in Montana	4786	Beran, Ivan D., relief	6241, 12185, 13846
Belts, <i>see</i> Automobile seat belts.			
Belvoir, Fort, land conveyance	15458		
	17205		
Ben Bella, Ahmed, Algerian socialism, fine distinctions from Egyptian	2729		
Bendat, Julius S., random responses, prediction of peaks, fatigue damage, and catastrophic failures	9535		

	Entry		Entry
Berard, Paul F., metalworking machinery, summary for 1963----	13756	Bernstein, Leon, reducing salt injury to ornamental shrubs in West-----	7921
Berczeller, Jolan, relief-----	234	Bernstock, William M., bulletin of prosthetics research-----	13506
Berdan, Jean M., Helderberg Group and position of Silurian-Devonian boundary in North America-----	6799	Berries, bush, production, use, value, by States, 1962-63-----	15129
Berger, Edward, relief-----	15462	see also names of berries.	
Berger, Lawrence B., safe use of respiratory protective equipment in work in compressed air, detection and physiological effects of gases encountered-----	18706	Berry, Frederick H., walnut anthracnose-----	14299
Berger, Martin J., energy spectra, etc., of electrons transmitted through sapphire foils-----	9539	Berry, L. J., effect of exposure to low temperature on blood clearance of carbon and bacteria in mice-----	4244
Bergeron, Hugh P., measured transfer functions of pilots during 2-axis tasks with motion-----	9582	tryptophan pyrrolase in endotoxin poisoning-----	4248
Bergin, M. J., bedrock geology of Penn Yan and Kenuka Park quadrangles, N.Y.-----	12505	Berry, Leslie A., computation of Hankel functions-----	14940
Bering Sea: oceanographic cruise by USCGC Northwind, July-Sept. 1962, report-----	11961	Berry, Richard M., research and other activities of private foundations, 1960-----	18834
oceanology, USSR studies-----	10933	Berryman, William L., relief-----	6415, 8200
Berkenkotter, Richard D., application of statistical analysis in evaluating bedded deposits of variable thickness-Florida phosphate data-----	20502	Bershad, Neil J., optimum design of multipath signals-----	17005
Berkshire Hathaway, Inc., wage chronology, 1943-64-----	18628	Berthy, Howard P., selected opportunities for wood industries development in West Virginia through application of FPL research-----	6744
Berkstresser, C. F., jr., ground-water resources of Waupaca County, Wis-----	10656	Bertram, Mitchell H., correlation graphs for supersonic flow around right circular cones-----	14872
Berlin, Germany: Autobahn-----	92	correlation of oblique shock parameters for ratios of specific heats-----	11421
problem road-----		pressure and heat-transfer distribution of delta wing in hypersonic flow-----	11418
US-USSR incident, German study-----	1331	Bertrandite, continuous flotation, Mount Wheeler beryllium ores-----	9504
Heinrich Hertz Institute of Berlin-Adlershof, contribution to International Year of Quiet Sun, East German translation-----	7002	Beryl, continuous flotation from spodumene mill tailing, Foote Mineral Co., Kings Mountain, N.C.-----	14748
market for U.S. electronic components-----	8102	Beryllia, see Beryllium oxide.	
West-----		Beryllium: bearing tuff, Honeycomb Hills, Juab County, Utah, mineralogical investigation-----	9524
economic statistics, handbook-----	3564	corrosion, Atomic Energy Commission, final report-----	5972
plant quarantine import requirements-----	9924	crystal chemistry-----	6809
Bermudagrass, varieties for general-purpose turf, evaluation-----	16947	depletion rate, extend to all ores-----	17429
Bernalillo, N. Mex., Rio Grande, flow resistance and sediment transport-----	10648	law reports-----	17815, 17748
Bernard, Patrick S., bibliography on snow, ice and permafrost, with abstracts-----	8511	electrorefining, prototype cell operation-----	16639
Bernardo, Anthony F., relief-----	15624	minerals yearbook chapter-----	14729
veto-----	17462	minute quantities determination, analytical techniques development-----	1529
Bernardo, N. Mex.: Rio Grande conveyance channel, stream gaging control structure-----	21357	Mount Wheeler ores, continuous flotation of bertrandite and phenacite-----	9504
sediment transport parameters, Rio Puerco-----	811	relation to industrial hygiene, USSR articles-----	21518
Berndt, A. K., interpolation and coordinate transformation program providing accurate local antenna pointing from predicted satellite positions-----	13218	rolled, of different purity, deformation and destruction, USSR study-----	18604
Bernett, Marianne K.: behavior of monolayers of progressively fluorinated fatty acids adsorbed on water-----	5592	Spor Mountain, Utah, ore-----	1440
hydrophobic and oleophobic fluoropolymer coatings of extremely low surface energy-----	13341	acid leaching-----	14751
prevention of liquid spreading or creeping-----	5604	solvent extraction-----	
Bernhard, Rudolf K., shear stress measurements in situ of soils subjected to vibratory loads-----	8513	Beryllium oxide, indium foil with beryllia washer improves transistor heat dissipation-----	11368
		BES series-----	2292, 4656, 8498, 21276
		Besco, R. O., manual attitude control systems-----	13150
		Bessel functions: computation of Hankel functions-----	14940
		regular, backward recurrence method for computing-----	9577



# INDEX 1964

Entry	Entry
Bessemer process, algorithm for use with digital process-control computers for determining time at which blow-out should stop when given carbon content is reached in Bessemer converter	18440
Besso, Henry V., Ladino books in L.C., bibl	5456
Besterman, Walter M., immigration and nationality act, etc.	15595
Beta decay, tables of radial functions and tangents of phase shifts for light nuclei	18804
Beta functions, see Mathematics.	
Beta rays:	
beta-radiation at 1st atomic power station, USSR study	18371
beta-radiation therapy in ophthalmology, USSR study	20206
Bethlahmy, Nedavia, improved procedure for calculating stream discharge	18081
Bethlehem, Pa., occupational wage survey	13068
Bethlehem Steel Co., overpricing for nuclear frigate U.S.S. Bainbridge, GAO report	8731
Beverages:	
days' supply in warehouses, 1963, civil defense study	35
inventory in warehouses, 1962, civil defense study	5833
Beyster, J. R., integral neutron thermalization	13692
BFS, see Family Services Bureau.	
Bhachau area, Kutch, India, ground water in sandstone	815
Bhalla, C. P., tables of electron radial functions and tangents of phase shifts, etc.	18804
Bible:	
reading in public schools—proposed constitutional amendments—	
hearings	17658
print additional copies, reports	17561, 17818
staff, study	10328
Supreme Court decision, explanation	571
Supreme Court opinions, print additional copies, reports	4456, 4534
Bibliography:	
accident prevention	7701
aerospace medicine and biology	16668, 18728, 20539, 21744
aerospace science	16664
Africa south of Sahara, selected annotated list of writings	11303
African music	14715
aging in modern world	9883
aging (physiology), includes geriatrics, gerontology, longevity	11661, 13491
agricultural books and periodicals	1489
agriculture	3041, 3279
agriculture, serial publications indexed in	14930
Air Force Academy Library series	20934
Air Force scientific research, 1957-58	16986
air pollution	18892
air pollution and kraft pulping industry	15047
air pollution and purification	1794
aircraft noise and its problems	6612
airport management	6609
airport site selection	6607
airports, design, construction, and maintenance	6615
airports, planning, management and operations, safety	17962
alcoholism	14946
Bibliography—Continued	
American history—	
departmental edition	11815
document edition	12017
publications, price list	3095
anthropometry	9851
architecture of mental health facilities	13416
arms control and disarmament—studies in progress or recently completed	7773, 15106
Army Medical Research and Nutrition Laboratory, reports and reprints	13688
atomic energy literature	124, 4290, 13708, 19247, 5682
automatic merchandising industry—automation and other technological developments, implications	5436
aviation basic library, general reference, cataloging, and book selection titles	6608
bakery products	5679
battered child	196
batteries	11659
bearings	9849
bibliographic list, Federal Aviation Agency	6607-15, 17962
bioastronautics	1795
Biodynamics and Bionics Division research reports and publications	11797
biological control systems, Soviet research	10877
biomedical research studies	13732
Bonneville Power Administration, 1930-63	19271
bookstore operation	5680
business management, etc.	7682
cancer	16842
cancer in subhuman primates	18916
Chinese agricultural publications from Republic of China since 1947	9628
Chinese mainland science and technology	1793
ciudadelloidea	11744
Civil Aeromedical Research Institute recently translated material	139
Clearinghouse Exchange of publications of State departments of education, secondary education personnel	14179
college and university science facilities planning aids	14178, 14196
commercial supersonic transport aircraft research program	6614
communications and electronics	1741
communications satellites	14799
Communism, world—	15608
print as Senate document, reports	8429, 15686
community development abstracts of periodical literature, books, etc.	21374
curriculum materials for trade and industrial education	8497
cutthroat trout	21317
design of facilities for long-term patients	3100
discount retailing	11605
education—	
elementary education	14193, 14197
international education	2285
literature of profession	581
programs for women	5770
selected references	14193, 14197
Education Office publications, on higher education, 1963	8495
Educational Materials Laboratory reports	581, 6564-65, 14183, 15842
effects of radiation and radioisotopes on life processes	11865
electret	7663

	Entry
<b>Bibliography—Continued</b>	
engineered performance standards	11658
ethnic minorities of southern	
China	9779
exceptional children and youth	590
expanded plastics	11660
external research lists	7750-59,
9786-95, 20812-818	
external research papers	9779-85
Far East	6565
farm management, etc.	15036
Federal organization for conduct	
of educational programs	141
fertilizers	1800
field emission, Soviet research	
1960-63	5550
filament wound construction	9853
financial management	4835
fire-extinguishing material tech-	
nology	16890
fish culture and related subjects	19726
fish diseases and parasites	15921
fish parasites and diseases	8621
flood damage prevention, index	1632
flood routing methods and unsteady	
flow in channels	18140
fluid amplifiers	21726
fluxes and their use in aluminum	
soldering	8070
foreign countries, statistical pub-	
lications	3525
foreign-language and English dic-	
tionaries in physical sciences	
and engineering, 1952-63	16737
foreign social science series	186,
6047, 8133-34,	15324
fungus defects in forest products	
and decay in trees	6740
galactosemia	4358
game theory and its application to	
social sciences	9784
gasification of coal underground	5472
grease lubrication	16891
ground-water hydrology, laboratory	
and field methods	12529
handbooks, etc., cataloged by	
ASTIA	14166
handicrafts and home businesses	18943
hardware retailing	13444
heavy water production	17060
heliports—	
design, construction, and main-	
tenance	6615
planning, management and opera-	
tions, safety	17962
high energy propellants	13159
highway right-of-way acquisition	9737
Hispanic Foundation series	1391,
5456, 13090	
homemaker services	10084
Horticultural Crops Branch, AMS	4186
House Committee on Appropria-	
tions and budget process	10042
housing, building and planning,	
United States AID missions	18156
housing and planning	3580
ignition and spark-ignition sys-	
tems	1494
intelligence, PACAF basic bibliog-	
raphies, supplement	5892
interlocal governmental coopera-	
tion	5841
international control of weapons	
systems, 1964-65 high school	
debates	12167
investment and operating costs for	
chemical and petroleum plants,	
Jan.-Dec. 1963	13109
Japanese science and technology	1796
job type machine shop	11606
Kenaf, 1950-62	6555
Kennedy, John F., chronological list	
of references	16617

	Entry
<b>Bibliography—Continued</b>	
labor	21838
labor organizations and antitrust	
laws	2941
laboratory-industrial cleaning tech-	
niques and materials	14167
Ladino books in Library of Con-	
gress	5456
lake deposits, ancient, Precambrian	
to Pleistocene in Western	
States	15940
laser materials	20519
Latin America—	
Army pamphlet	15270
paperback books	13090
liquid metal boiling	46
lubricants and lubrication	15833
lunar and planetary research	5872
lunar surface studies	14798
management, centralized and decen-	
tralized	6613
manufacturers' agent	20786
marine primary productivity	126
marketing information guide	3710
marketing research methods	4336
materials testing	9850
measurement of bulk resistivity of	
semiconductor materials for	
electron devices	21785
medical reviews	13294
medical translations	10755, 18818
subject index	18917
mental retardation, world litera-	
ture	5634
metal coatings	7813
metal composites	9852
meteorology and hydrology, 1962	2749
metropolitan America	19599
migration of farm people 1946-60	38
missiles and ventures into space,	
progress report, 1962-63	102
mollusca of Augustus Addison	
Gould	14962
motels	11604
music curriculum guides	19632
NASA's human factors system pro-	
gram	18729
national directories for use in mar-	
keting	13441
natural hibernation, mamma's	19145
Near East and north Africa, Educa-	
tional Materials Laboratory re-	
port	14183
nematology	17
neurosurgery, USSR literature sur-	
vey	7209
new product development and sale	5678
North American geology	18114
nuclear explosives, peaceful uses	8069
nuclear science conference litera-	
ture, availability	1780, 8084, 13717
nuclear science, list	13725
nuclear theory reference book	10036
numerical weather prediction for	
1962, USSR publications	11691
nursery business	13442
oceanography, physical and chemi-	
cal	18000
OTS selective bibliography SB	
series	149, 1793-1800,
9840-53, 11658-664, 13491	
list	7812
outdoor recreation, periodicals	19818
PACAF basic bibliographies	68,
1741, 5892, 9082	
paper	149
personnel literature	3847
personnel management	11607
PERT (program evaluation and	
review technique)	93
phenylketonuria	4361
photographic dealers and studios,	
business and technical informa-	
tion	20787

# INDEX 1964

	Entry
<b>Bibliography—Continued</b>	
PL—480 translation program—	
agriculture, food, fishes, forestry—	11662
biological sciences—	11663
science and technology—	11664
plastics—	19619
plastics, technical conference pa-	
pers, 1962-63—	564
popular science library, USSR—	16172
Presidents of U.S.—	5457
processing plant feasibility—	14236
program evaluation and review	
technique—	6610
propaganda—	20934
psychiatric index for interdiscipli-	
nary research, guide to litera-	
ture 1950-61—	19011
public health series—	1562, 9721, 11568,
13416, 16842, 18916-918,	21854
Public Health Service numbered	
publications, 1950-62—	21854
radiation effects on mammalian eye,	
index—	21015
radioactive waste processing and	
disposal—	19244
radioecology, terrestrial and fresh-	
water—	125, 15285
radioisotopes in agriculture—	15283
radioisotopes in world industry,	
abstracts of selected foreign	
literature—	4362, 19248
radiological health—	13413
reactor containment—	5973
reactor safety—	15284
reading research for middle grades—	599
real estate and insurance—	20788
recordkeeping systems, small store	
and service trade—	9765, 21867
reprocessing irradiated fission re-	
actor fuel and breeding materi-	
al—	19245
research on programmed instruc-	
tion—	14194
research reports—	4101
retail credit and collections—	20786
retail florist—	16857
retail merchandising and promo-	
tion—	15080
retailing—	9764
rheumatic fever, glomerulonephri-	
tis, and streptococcal infections	
1564, 15043,	18918
rock deformation—	19188
rural areas, cooperation among	
local governments—	5841
safety of chimneys and fireplaces—	3044
sales management for manufactur-	
ers—	9767
saline water—	
conversion—	847
desalination, membrane technol-	
ogy—	848
secondary education—	4631
semiconductors and thermoelectric	
science—	150
serials, union lists—	20453
shielding against gamma rays, neu-	
trons and electrons from nu-	
clear weapons—	7577
shorter workweek—	1362
small business—	5678-82,
9764-67, 11604-607, 13441-445,	
15079-80, 16857 18943, 20786-	
789, 21867,	
smoking and health, 1958-63—	11568
snow, ice and permafrost, with ab-	
stracts—	8511, 19652
cumulative index—	15866
social science periodicals and mono-	
graph series—	
Finland, 1950-62—	186
Hungary, 1947-62—	6047
Norway—	8134
Poland, 1945-62—	15324
Turkey—	8133

	Entry
<b>Bibliography—Continued</b>	
soil and water conservation—	7890,
9916, 15197,	20898
solid state optical and infrared ma-	
ter materials—	7958
southeast Asia, selected reference,	
western language sources—	21680
Soviet and Chinese policy towards	
underdeveloped countries—	9783
Soviet diagnostic radiology, survey	
of published literature, 1959-	
63—	7093
Soviet education, English-language	
materials—	17923
Soviet military doctrine—	9780
space environmental conditions, bio-	
logical aspects—	1799
space medicine—	1797
store arrangement and display—	15079
store location—	9766
structural sandwich, plastic lami-	
nates, and wood-base compo-	
nents—	18047
student financial aids—	12326
subcritical assemblies—	1772
supersonic transport, economic	
aspects—	6611
synthetic detergents in water and	
wastes—	7690
systems for nuclear auxiliary power	
(SNAP)—	17061
technical translations, OTS peri-	
odical—	4080
periodicals translated in, basic	
list—	4325, 18997
thermal degradation, oxidation, and	
analysis of high polymers—	4608
thermoluminescence—	1773
thermophysical properties of argon	
from 0 to 300° K—	14941
trafficability and mobility research—	12353
Transportation and Facilities Re-	
search Division, AMS—	4187
trucking and cartage—	13445
TVA—	
program—	1629
tributary area development activ-	
ities—	1634
United Nations, new materials use-	
ful in teaching—	6564
United States books translated into	
Spanish and Portuguese—	1391
United States power reactors, anno-	
tated bibliography of selected	
literature—	19246
upper layers of atmosphere and	
space, USSR—	14926
USSR and Eastern Europe—	20454
vacuum and low-pressure measure-	
ments, errata—	13273
variety stores—	13443
venereal disease—	3206
Vietnam, Democratic Republic of—	9781
Vietnam, Republic of—	9782
weightlessness and acceleration—	1798
wholesaling—	5651
wildlife abstracts, 1956-60—	10581
wood chemistry—	18046
wood, growth, structure, etc—	6741
works by scientific personnel of I. V.	
Grebenshchikov Institute of	
Silicate Chemistry, Academy of	
Sciences, USSR—	12994
Yemen tribes—	9785
Zostera marina—	10579
see also names of departments, etc.,	
issuing lists of publications.	
Bidding, see Government contracts.	
Bienlewska, Carl L.—	
mineral industry—	
Nebraska—	1419
South Dakota—	1423

# JANUARY-DECEMBER

	Entry
Bienstock, Daniel, removal of hydrocarbons, etc., from automotive exhaust using uranium catalyst	1441
Big Creek, Calif., principal electric facilities, map	677
Big Delta, Alaska, ground temperature observations	17940
Big Dutchman Automatic Poultry Feeding Co., E award for exceptional performance in export trade (remarks)	21096
Big Flat Irrigation District: repayment contract, modification—law	12010
report	10263
Big Flat unit, see Missoula Valley project	
Big game, see Game and game birds	
Big Hole National Battlefield, general information	14964
Big Horn Canyon National Recreation Area, see Bighorn Canyon National Recreation Area	
Big Indian district, Utah, Mi Vida uranium mine, statistical interpretation of sample assay data	21717
Big Lake National Wildlife Refuge, general information	6727
Big Sioux River: and tributaries, engineer report—departmental edition	12334
document edition	12022
Big Stone Lake: flood control, engineer report—departmental edition	10484
document edition	10158
Bigelow, Donald N., NDEA language and area centers, report on 1st 5 years	19634
Bigelow, Mo., railroad accident	6868
Bighorn Canyon National Recreation Area: establish—	
hearing	14141
report	21228
Bikini and nearby atolls, Marshall Islands (series)	15945
Bilello, Michael A., ice prediction curves for lake and river locations in Canada	17937
Billingsastraea, see Corals	
Bills (congressional): armed services, hearings on miscellaneous bills	388-391,
10294-295, 10297, 13990-991, 17633-635, 17638	
digest	3421
history	3351
miscellaneous, hearings	6336
see also House bills—Senate bills—also subjects of bills	
Binary stars, see Stars	
Binaural beat perception, see Perception	
Bindery workers: examination announcement	4378
amendment	11932
Binghamton, N.Y.: relief—law	1946
report	4531
Binkley, Virgil W., comparison of high-lead yarding production rates in windthrown and standing timber	18071
Binocular disparity, depth perception	4313
Binocular visual acuity of adults, United States, 1960-62	13424
Binoculars, see Field glasses	
Binomials, moments of sampled binomially distributed variable	13332
Bins, rice storage, use of reflective paints	9909

	Entry
Bioastronautics: bibliography	1795
biomedical research studies, bibliography	18732
Biocenology, methodological problems, USSR study	2893
Biochemistry: abnormal human hemoglobins, theories on control mechanisms for antibody formation	9006
alpine climates	12971
chemical bases of virulence and pathogenicity of microorganisms, USSR study	21633
electron paramagnetic resonance method, USSR study	18362
hemoglobin, comparative, USSR translation	18517
Hungary, research	18502
psychoses produced by hallucinogens, Czechoslovak study	7072
Ukrainian reports	10784
USSR 1st all-Union congress, translation	18367
Investigations	12795
research	1071
sequential problems	21550
studies	14569
translations	1276
Biochemists: examination announcement, admt. Volga conference	4375
9115	
Biocenology, see Biocenology	
Biocybernetics, information processes, USSR study	12773
Bioelectricity: activity of cerebrum, effect of indopane, USSR study	2857
activity of nervous system in developing and diapausing Lepidoptera pupae, USSR study	16141
nonpolarizing electrodes for detecting slowly varying biopotentials in internal cavities	9627
Biogeochemistry: radiation hygiene problems, USSR study	7000
sulfur, USSR study	4986
Biography: Croatian civil engineers and technicians	7033
German political figures, Soviet biographies	18265
Israeli scientific and technical personalities	2884
State Dept., biographic register	1595
USSR scientists	2862-63,
7159, 8909, 9163, 12625, 12657, 12678, 14418, 16380, 19909, 20317, 20333, 21539	
see also subjects of biographical sketches	
Bio-Instrumentation for control of pressure chambers	21825
Biologic control of plant diseases and pests	1036
Biological agents, see Biological products	
Biological Area, Canal Zone, see Canal Zone Biological Area	
Biological controls for insects and diseases on agricultural crops, hearing	4485
Biological Laboratory, Galveston: fishery research, 1963	12424
general information	10553
Biological physics: amino acids and proteins, biophysical studies, USSR	9820
continuous models of excitable media, USSR study	10876
modern, subject and methods, USSR study	5144



# INDEX 1964

	Entry
Biological physics—Continued	
photosynthesis and radiative trans-	
actions, USSR studies.....	16411
polymers, nucleic acids and brain	
neurons, USSR studies.....	10881
research reports and publications	
issued by Biodynamics and Bi-	
onics Division, bibliography....	11797
role in development of medicine,	
USSR study.....	1220
ultrasonic vibrations in molecular	
biophysics, USSR study.....	16329
USSR plant protection through	
biophysics.....	2802
USSR research.....	5386, 16330
Biological products:	
harmful agents, utilization of en-	
zymes for detection, USSR	
study.....	18289
judicial review of agency orders,	
hearing.....	12146
notices of activities of licensed es-	
tablishments.....	3280
regulations, Public Health Service..	11550
<i>see also</i> Drugs.	
Biological sciences, <i>see</i> Biology.	
Biological warfare:	
disease agents as military weapon,	
East German study.....	1326
protecting food and water against	
chemical-biological-radiological	
attack, USSR translation.....	14555
USSR, individual means of protec-	
tion against chemicals and ra-	
diation.....	20103
Biologists:	
examination announcement, amend-	
ment.....	21055
fishery and wildlife, examination	
announcements.....	10105, 19334
public health scientists, examina-	
tion announcement.....	209
Biology:	
abstracts pertaining to Communist	
China in Soviet journals.....	1080
Academy of Sciences, USSR, biol-	
ogical investigations.....	16237
achievements of modern biology,	
translations.....	16331
action mechanism of medicinal sub-	
stances as biological problem,	
USSR study.....	2660
AEC program, hearings.....	8235
AEC research and development in	
progress.....	4301, 13711
aerospace, bibliography.....	16668, 18728, 20539, 21744
amoebas, ticks, bees and zooplank-	
ton, USSR studies.....	16409
bibliography, PL 480 translation	
program.....	11663
biological aspects of aging process,	
USSR study.....	12818
biological effects—	
gravitational acceleration.....	18232
lasers.....	20702
radiation, primary and initial	
processes, USSR study.....	7202
biological-like structures, USSR	
study.....	1285
biological mechanisms for applica-	
tion to instrument design.....	16654
biological sciences, reports on de-	
velopments, USSR study.....	20286
biological trend in scientific work	
in neurosurgery, development,	
perspectives, USSR study.....	9012
Bulgarian study.....	5277
chondrogenesis during long bone	
regeneration, USSR study.....	2476
cysteine, influence on radiation	
damage to seed, USSR study....	2515

	Entry
Biology—Continued	
East European journals, abstracts..	904,
948, 967, 977, 1044, 1084, 1090, 1173,	
1261, 1291, 1309, 1347, 1353, 2483,	
2633, 2666, 2687, 2726, 2762, 2805,	
2853, 2858.	
East European scientific abstracts..	4963,
4976, 5019, 5035, 5105, 5184, 5224,	
5249, 5274, 5293, 5317, 5338, 5348,	
5353, 5372, 5398, 6880, 6899, 6925,	
6949, 6976, 6985, 7008, 7026, 7042,	
7112, 7120, 7196, 7205, 7254, 7339,	
8890, 8895, 8921, 8950, 8971, 8996,	
9052, 9073, 9101, 9131, 9150, 9170,	
9206, 9237, 9287, 9306, 9367, 10729,	
10754, 10779, 10815, 10871, 10874,	
10959, 11041, 11050, 11065, 11089,	
11184, 11196, 12587, 12598, 12613,	
12636, 12654, 12680, 12719, 12740,	
12845, 12856, 12888, 12910, 13008,	
14422, 14435, 14470, 14564, 16003,	
16010, 16081, 16108, 16122, 16268,	
16286, 16318, 16361, 16376, 16444,	
16486, 16543, 18214, 18223, 18250,	
18278, 18312, 18337, 18374, 18387,	
18429, 18434, 18455, 18466, 18476,	
18490, 18526, 18557, 19027, 19081,	
19983, 20125, 20156.	
effect of radiation on hereditary	
molecular structures, USSR	
study.....	1008
experimental, USSR study.....	19910
human health and laws, USSR	
study.....	18818
Hungary, Biological Sciences De-	
partment, Academy of Sci-	
ences, leadership report.....	7257
identification and biological anno-	
tation of insects affecting seed	
production of slash and long-	
leaf pines.....	8691
instruments and apparatus for biol-	
ogical investigation and med-	
ical diagnostics, USSR study....	18340
hilly of the valley, USSR study.....	16153
man's biological future, USSR	
study.....	10762
mathematical methods use, USSR	
studies.....	7020
mental retardation, its biological	
factors, hope through re-	
search.....	18902
Microwaves, effect, problems of	
mechanism, USSR study.....	4894
nuclear radiations in biology,	
USSR study.....	18481
population structure change	
through selection in case of	
overdomination, USSR study....	12811
problems related to development of	
chemistry, USSR study.....	26374
prostate and related tissues.....	1502
recordings, improved electrode for	
obtaining high quality wave-	
forms.....	14821
research, Hungarian Academy of	
Sciences, translations.....	18456
skin homotransplants preserved by	
various means, criteria of biol-	
ogical evaluation, USSR	
study.....	20005
studies under conditions of space	
flight and weightlessness,	
USSR.....	16322
subdivisions of biological science,	
problems arising from Plenum	
resolutions, USSR.....	16490
systemic organization, USSR	
study.....	7290
theoretical, problems of system or-	
ganization, USSR study.....	2596
use of optical quantum oscillators,	
prospects, USSR study.....	5308

	Entry		Entry
Biology—Continued		Biphenyl, <i>see</i> Diphenyl.	
USSR—		Birch, Maurice E., foreign trade regulations, New Zealand	6858
abstract journal, zooparasitology	2873-75, 9335, 9337	Birch:	
articles	10910	collar crack, general information	21328
biological sciences in light of November Plenum of CCCPSU	10866	nursery selection affects survival and growth	778
conferences	9000	yellow—	
conferences on medicine and biology	2498	germination of seed following natural stratification in upper Michigan	6746
research on biological control systems, survey of published literature, 1962-63	10877	regeneration on artificially constructed mounds	779
research, popular accounts	12996	root development in humus and sandy loam	780
sciences, development	1122	Bird, J. B., world atlas of photography from Tiros satellites I to IV	20525
scientific abstracts	1335, 2657, 5107, 5283, 7162, 8996, 10940, 14424, 16092, 18194, 19900.	Bird, Kermit:	
studies on general biology	18549	freeze-dried foods and frozen food industry	2267
translations from <i>Bulleten' eksperimental'noy biologii i meditsiny</i>	16142	freeze-drying of foods, cost projections	4210
<i>see also</i> Biocenology—Life—Marine biology—Microbiology—Radiobiology—Space biology.		Bird, Leonard L., radiological mechanisms for geophysical research, annual report	19240
Biology and Medicine Division, AEC, offsite ecological research, terrestrial and freshwater	130	Bird traps:	
Biomedicine:		decoy for blackbirds and starlings	14275
biomedical research studies in acceleration, weightlessness, etc., bibliography	13732	floodlight trap for capturing at roosts	6731
bio-medical science, East European scientific abstracts	21396	Birds:	
international biomedical research, 1st National Institutes of Health International symposium, proceedings	18815	Back Bay National Wildlife Refuge, list	8607
research laboratories, space planning principles	1563	Buffalo Lake National Wildlife Refuge, list	15923
Biometrical method in botanical taxonomy, USSR	16031	China, economic fauna	8904
Bionics:		conservation note	6712
advances in aerospace medicine and animal systems, USSR study	16443	embryos, measurement of heart-beat	11364
application of living systems to technological problems, USSR study	1121	flight, USSR study	10977
bionics and fishing, USSR study	10766	flocks in central Pacific Ocean, 1950-61	15930
methods and results, USSR study	12928	Hagerman and Tlahomingo National Wildlife Refuges, list	6723
military technology, USSR study	18321	hibernation	4246
research reports and publications issued by Biodynamics and Bionics Division, bibliography	11797	Holla Bend National Wildlife Refuge, list	8608
USSR research	5336	Lacassine National Wildlife Refuge, list	6724
what is bionics? USSR study	16172	Loxahatchee National Wildlife Refuge, list	6725
Biophysics, <i>see</i> Biological physics.		Ninepipe and Pablo National Wildlife Refuges, list	15922
Bio-sciences, English abstracts of selected articles from Soviet bloc and mainland China technical journals (series)	3444	ornithological research, USSR articles	10818
Biosphere, fresh water components radiolotope distribution, USSR study	1070	Panama, additions to records protected by Federal law	3129
Biostratigraphic separation of bottom sediments at station no. 3802 in equatorial Pacific, USSR	7179	radiosensitivity of birds, USSR study	6945
Biosynthesis:		Savannah National Wildlife Refuge, list	8606
antibodies, induced by ribonucleic acid from lymphatic nodes and spleen of immune rabbits, USSR study	9114	Thailand, checklist	3059
chlortetracycline, stimulation by aromatic amino acid antagonists, USSR study	9018	Valentine National Wildlife Refuge, list	19732
human biochemical genetics, translation	20106	Wichita Mountains Wildlife Refuge, list	14279
proteins, USSR study	20101	wild, free importation—	
Biotelemetry:		law	17341
cynatic, USSR study	9184	reports	14098, 15544, 21194
physiologic reactions to use, USSR studies	10921	<i>see also</i> Water birds— <i>also</i> names of birds.	
subminiature unit permits remote physiological investigations	20362	Birge, George W.:	
		carbonizing properties of coals, Buchanan, Dickerson, Russell, Tazewell, and Wise Counties, Va	5496
		carbonizing properties of Letcher County, Ky., coals	9528
		Birks, L. E., X-ray topography of ruby crystals	9682
		Birmingham, Ala.:	
		occupational wage survey	16596
		principal electric facilities, map	679

# INDEX 1964

	Entry		Entry
Birth:		Black Hills—Continued	
inborn heart defects-----	20753	uplift, Wyo., Mont., and S. Dak.,	
live, State definitions of-----	11579	stratigraphy and structure of	
natalty, statistics analysis, United		northern and western flanks-----	21354
States, 1962-----	20771	Black Sea:	
natalty, vital statistics of U.S.-----	5667-68, 77708	northern and western flanks-----	21354
perinatal mortality, means of reduc-		flasion products, USSR study-----	5028
ing, USSR study-----	21587	hydraulic-engineering problems of	
records, where to write-----	11586, 20772	Rumanian littoral, Constanta,	
trends-----	2436	symposium-----	8859
Biscay, Bay of, sailing directions,		lights and fog signals, list,	
change-----	18838	change-----	16780, 21814
Bishop, Walton B., progressive failure		Black walnut, see Walnuts.	
prediction-----	13642	Blackbirds:	
Biskup, Jozefa T., relief-----	309, 6153, 6396	decoy trap-----	14275
Bismarck, N. Dak., population, special		floodlight trap for capturing at	
census-----	4352	roosts-----	6731
Bismuth:		Blackburn, G. F., bibliography on ignition	
metal, mineral industry survey,		and spark-ignition systems-----	1494
quarterly-----	3281	Blackfoot Indian project:	
minerals yearbook chapter-----	14730	Plegan unit, transfer to landowners	
Bisson, Edmond E., advanced bearing		within unit-----	
technology-----	7477	law-----	10147
Bites and stings, poisonous bites,		reports-----	497, 8322
treatment and prevention,		Blackflies, see Flies.	
USSR study-----	20236	Blackmon, C. A., aerial cone penetrom-	
Bitter rot, apples, general information		eter field test studies in fine-	
tion-----	1703	grained soils-----	643
Bitterbrush, grass competition, effects		Blackshear, W. Thomas, equilibrium	
-----	8664	free surface of contained liquid	
Bittker, David A., effect of ambient air		under low gravity and centrif-	
velocity on atomization of 2		ugal forces-----	20598
impinging water jets-----	7509	Blacksmiths, employment outlook-----	9428
Bituminous coal, see Coal—Coal		Blackstock, Thomas A., hypersonic	
mines and mining.		aerodynamic characteristics of	
Bituminous sand, tar sands deposits		simple winged shapes in air	
in U.S., potential of nuclear ex-		and helium-----	14866
plosives as stimulant for hydro-		Blackwell, James A., jr., effects of	
carbon production-----	13110	configuration geometry on	
Black, David S., nomination, hearings		transonic aerodynamic character-	
-----	4576	istics of canard airplane	
Black, Deane M.:		configurations-----	20595
establishing business in New Zea-		Blade, O. C.:	
land-----	2455	aviation fuels, 1963-----	9407
foreign trade regulations of Aus-		burner fuel oils, 1964-----	20495
tralia-----	867	diesel fuel oils, 1963-----	1432
Black, Fred B., jr., testimony, hearings		motor gasolines-----	
-----	6526	summer 1963-----	5479
Black, James A., Romney Federal		winter 1963-64-----	14741
Credit Union and its contribu-		Blades:	
tions to community-----	6606	blade-element performance of axial-	
Black, James B., remarks, June 23,		flow-pump rotor-----	18790
1964-----	13031	helicopter rotor-blade differential	
Black, Robert F., Gubik formation of		pressures, stresses and motions	
Quaternary age in northern		as measured in flight-----	9564
Alaska-----	10635	ship propeller, determination of ice	
Black Bayou:		load encountered, USSR study-----	18336
declare portion nonnavigable water-		strength of screw propeller blades	
way-----		for ships used in ice navigation,	
law-----	17263	USSR study-----	18239
reports-----	10219, 15705	twisted rotating and nonrotating,	
Black body, reference, compact, convenient to use		natural frequencies in coupled	
-----	11366	bending and torsion-----	14778
Black Canyon of the Gunnison, Cur-		Blaeser, Gustav H., measurement of	
recanti pluton, unusual intrusive		noise figure of X-band wave-	
body-----	4780	guide mixer with tunnel diode-----	19169
Black Canyon of Gunnison National		Blaine County, Mont., geology of	
Monument, general information		Cleveland quadrangle, Bear-	
-----	9655	paw Mountains-----	18104
Black Earth Creek, hydrology of upper		Blair, Emil, surface immersion hy-	
basin-----	821	pothemia-----	8044
Black Hills:		Blake, Doris H., notes on new and old	
nonopaque heavy minerals in sand-		species of Alticinae (coleop-	
stone of Jurassic and Creta-		tera)-----	7598
ceous age-----	4777	Blake, Henry E., jr., preparation of	
southern-----		aluminum fluoride from alumina	
geology and uranium deposits		hydrate and dilute fluoride solu-	
(series)-----	2411-12, 21348	tions-----	20500
pegmatites and other Precam-		Blake, Rolland L., iron phyllosilicates	
brian rocks (series)-----	4783	of Cuyuna and Mesabi districts	
pegmatites, geology and mineral		-----	9511
deposits-----	4783	Blamont, J. E., resonance scattering	
		at Lyman-alpha by atomic hy-	
		drogen cell-----	13221

try	Blanchard, R. A., temperature and rainfall as they affect corn ear-worm damage to dent corn-----	20896	Blister rust, blister rust found on limber pine in northern Wata-satch Mountains-----	16935
354	Blanchard, Ulysse J., lunar landing configuration-----	7500	<i>see also</i> White pine blister rust.	
354	Blanshel, Jack, Soviet anesthesiology, literature survey-----	7293	BLM, <i>see</i> Land Management Bureau.	
028	Blasko, John J., new programs in VA psychiatry and their implications for volunteers-----	9868	Bloch, Joseph W., health and insurance benefits and pension plans for salaried employees, spring 1963-----	14704
859	Blast, surface effects from aircraft propeller downwash and jet- and rocket-engine blast, Waterways Experiment Station research capabilities-----	639	Block, David L., influence of ring stiffeners on instability of orthotropic cylinders in axial compression-----	21775
731	Blast furnaces:		Blocks, <i>see</i> Earth blocks.	
	fuel, anthracite metallurgical briquets-----	7459	Blomquist, R. F., experiments in gluing southern pine veneer-----	12451
494	iron, thermochemical model, developing-----	7454	Blood:	
	<i>see also</i> Slag.		Alaskan ground squirrel, variations during hibernation and induced hypothermia-----	19142
147	Blasting:		arterial lactic acid of dogs, transient changes at 21,000 feet-----	9986
322	explosion-generated motion scaling laws validity, case study-----	14754	ascorbic acid levels as related to oral health status-----	1746
	mine roof rock and roof bolt behavior resulting from nearby blasts-----	9501	blood structures, USSR studies-----	2548
643	vibrations, instrumentation to record, design requirements-----	14763	carbon and bacteria clearance in mice, effect of low temperature exposure-----	4244
	Blatnik, John A., Lock, <i>see</i> John A. Blatnik Lock.		cardiac output based on impedance changes, plethysmographic determination-----	9988, 15238
598	Blaustein, Albert P., civil rights U.S.A., public schools, cities in North and West, 1963, Camden and environs-----	6073	circulation, clinical physiology, outline-----	14912
428	Bleaching, two-stage nonchlorination, of hardwood neutral sulfite semichemical pulps-----	18057	correlation of dissolved nitrogen in whole blood with selected whole blood constituents-----	5903
866	Blew, J. Oscar, Jr.: comparison of wood preservatives in-----		cosmic factors effect on system, USSR study-----	1118
	Mississippi post study-----	12441	digital flow, effects of immersion of hand in cold water-----	20955
595	stake tests-----	14309	dogs with acute radiation sickness, humoral component in effect of bone marrow transplantation, USSR study-----	4905
497	Blickensderfer, Robert, rolled molybdenum single crystals, deformation textures, etc-----	20511	extracorporeal circulation, adrenal cortex function, USSR study-----	12759
495	Blight, <i>see</i> names of blight or plants affected.		flow, coronary arterial, flowmeter for measurement-----	17011
432	Blind:		hematologic changes following simple exodontia-----	5900
479	agencies for, military supplies purchased from, inspection and acceptance, DSA regulation-----	12299	hematology and blood transfusion, USSR studies-----	8922, 16055, 16464
741	model reporting area for blindness, statistical report, 1962-----	14958	hematology, Soviet practices-----	11008
790	public assistance-----		hemopoietic organs of animals exposed to radiation, micro-neurotic foel, USSR study-----	5229
564	money payments to recipients, Oct. 1963-----	14215	human, zinc content, growth-related changes, USSR study-----	16042
836	program facts-----	12356	intrarenal hemodynamic changes following acute arterial occlusion-----	5997
3239	State plans under social security act, staff development provisions-----	12355	morphological and functional properties changes and hemodynamics during work with extracorporeal circulation apparatus, USSR study-----	5228
1778	statistics, model reporting area, conference proceedings-----	11449	mouse peripheral, effect of cold exposure-----	10143
0169	totally, guides on air carriers-----	10322	oxygen content and capacity, polarographic determination in single sample-----	17014
3104	hearing-----	13973, 17541	peripheral elements, chronic irradiation, latent effects in monkeys-----	73
8044	reports-----		plasma nonesterified fatty acids in rats subjected to gravitational acceleration-----	16729
7598	veterans with loss or lost use of lower limb, grants for specially adapted housing-----	4573	plasma substitutes, USSR studies-----	1164
	hearing-----	17260	preparation and storage for transfusions, USSR-----	21589
0500	law-----	15695	program in World War II-----	21010
9511	report-----		rate of propagation of ultrasonic waves, problem, USSR study-----	1029
3221	Blindness, legal blindness and blindness, interviewing guides for specific disabilities-----	8501		
	Blindness and Neurological Diseases, National Institute, <i>see</i> National Institute of Neurological Diseases and Blindness.			
	Blindness Statistics, Model Reporting Area, <i>see</i> Model Reporting Area for Blindness Statistics.			



# INDEX 1964

Entry	Entry
Blood—Continued	Blue crabs—Continued
renal hemodynamics and renal function, acute and chronic effects of insecticide endrin.....	industry, mechanizing—Continued
serum, increase in enzyme activity due to strong stimuli, USSR study.....	strengthening industry's economic position.....
serum protein, change, patients with chronic radiculitis during treatment with vibration baths, USSR study.....	survey of processing plants.....
state of hemopoietic tissue in acute radiation sickness under conditions of bone marrow transplantation, USSR study.....	larvae (Callinectes), in plankton collections from cruises of M/V Theodore N. Gill, south Atlantic Coast of United States, 1953-54.....
substitutes and transfusion.....	Blue Cross, see Health Insurance.
thermal burns, interrelationship between plasma loss, hemocentration, changes in circulating blood volume and blood pressure, USSR study.....	Blue Knob Development Corp., REA recreation loan policy, hearing.....
transfusion—	Blue Ridge Parkway, general information.....
experimental and clinical study and theoretical foundation of operation, USSR study.....	Blue Shield, see Health Insurance.
USSR studies.....	Blue tongue, sheep, incidence reported in U.S., 1963.....
utilizable blood previously used for artificial blood circulation, USSR study.....	Bluegrass region, Ky., geochemistry of natural waters.....
Blood banks:	Blueprint for action, information for post or chapter employment officers of veterans organizations.....
plastic handling equipment, USSR study.....	Blueprints, reading and sketching, Navy training course.....
Soviet inter-relationship with military medical service, history, circulation, see Blood.	Bluestem, Flint Hills and Osage pasture report, Kansas and Oklahoma.....
Blood pressure:	Bluewater Springs area, Mont., geology and water resources.....
adults, by age and sex, U.S. 1960-62.....	Blunt bodies:
adults, by race and area, U.S., 1960-62.....	blunt bodies at large angles of attack, shock envelopes.....
antihypertensive drugs, trends in synthesis, USSR study.....	contamination-induced luminosity ahead of blunt body.....
high, health information series.....	cylinder-flare configurations—
hypertension, accelerometric precordial ballistocardiogram.....	ablation.....
hypertensive disease, treatment, intracardiac investigation, experimental, USSR study.....	heat-transfer rates and ablation.....
measurement in human body.....	hypersonic magnetohydrodynamics with or without blunt body.....
thermal burns, interrelationship between plasma loss, hemocentration, changes in circulating blood volume, USSR study.....	laminar compressible boundary layer in stagnation region in axisymmetric flow.....
Blood transfusion, see Blood.	moving at supersonic speeds in equilibrium gas, flow properties about blunt bodies.....
Blood vessels:	nonlifting vehicles entering earth's atmosphere at very high speeds, aerodynamic and rocket braking.....
cerebral vascular disease and strokes.....	shock-layer radiation at reentry velocities.....
cerebrovascular diseases, research grants.....	Board materials from wood residues.....
effect of G-force on structure of vascular system.....	Board of Education of District of Columbia, see District of Columbia.
vascular responses during hypothermia.....	Board of Foreign Scholarships, report.....
Bloodworms, Chironomid larvae, semi-commercial raising, USSR experiment.....	Board of Review, Judge Advocate General, court-martial reports, holdings and decisions.....
Bloom, Justin L., strontium-titanate radiolotope fuel for SNAP 7B thermoelectric generator.....	Board of Trustees of Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, report, 1963.....
Blowdown problems and solutions.....	Boards (lumber), see Lumber.
Blowers:	Boards (organizations), see subjects with which boards have to do, e.g. Vocational education.
current industrial reports.....	Boards of inquiry, military law and boards of officers, ROTC manual.....
summary, 1963.....	Boating:
industry, review of 1963, outlook for 1964.....	do's and don'ts of safe boating for recreational boatmen, Coast Guard information.....
BLS report series.....	laws and regulations, safety etc.....
2948-60, 5426-55, 7372-73, 9377-81, 11268-274, 13042-46, 14685-691, 16586-589, 18621-628, 20432-434, 21666-670	recreational, accidents, numbering and related activities, 1963, report.....
Blue crabs:	regulations in national park system.....
industry, mechanizing—	
measures for immediate relief through worker specialization.....	

# JANUARY-DECEMBER

	Entry		Entry
Boats, skin boats of North America.....	20653	Bohon, Herman L., flutter results for corrugation-stiffened panels.....	11414
see also Fishing vessels—Ice breakers—Launches.....		Bollermakers, employment outlook.....	7391
Boatswains, see Aviation boatswain's mates—Boatswain's mate.....		Bollers:	
Boatswain's mate, 3 & 2, Navy training course.....	16787	power, steel, current industrial reports.....	17758
Bocker, Dorothy, smoking and health bibliography.....	11568	ship propulsion, overpricing under contract with Foster Wheeler Corporation, GAO report.....	6778
Bodansky, Harry:		steam, high pressure, shutdowns, USSR industrial development, translations.....	21437
market indicators for Europe.....	4850	see also Slag (in boilers).	
U.S. share of world markets for manufactured products, analysis of changes from 1954-61.....	14395	Boiling:	
Bodhaine, G. L., magnitude and frequency of floods, Pacific slope basins in Washington and upper Columbia River basin.....	10658	flow, photographic study.....	8063
Bodies (aerodynamics), see Aerodynamics.....		liquid metal, literature survey.....	46
Bodies of revolution:		nucleate forces acting on bubbles under normal and reduced gravity conditions.....	16683
blunt, low-fineness-ratio, static stability characteristics at Mach number of 24.5 in helium.....	11409	nucleate pool boiling heat transfer, frequency response.....	19238
minimum drag with cross-sectional ellipticity.....	18760	see also Nucleate boiling.	
thin shells of revolution, geometrical and inertial properties.....	20522	Boiling water reactors, see Reactors (atomic).	
velocity and boundary layer, methods for computing flow distribution.....	7815	Boise, Idaho, occupational wage survey.....	20439
Body (human), see Anatomy.		Bokan Mountain, uranium-thorium area, southeastern Alaska, geology and ore deposits.....	6798
Body temperature:		Bokelman, W. Robert:	
dog, reduced set point while exercising.....	11785	changes in administrative and faculty salaries from 1960-61 to 1962-63.....	573
effects of tranquilizer.....	5998	faculty salaries in universities, etc., 1963-64.....	2278
reaction of skin during irradiation with microwaves of low intensity, USSR study.....	7063	new construction and rehabilitation on college campuses, 1961-62.....	4630
rectal temperature of working sled dog.....	4250	salaries and student charges in land-grant colleges and State universities, 1963-64.....	14195
see also Hypothermia.		Boldt, Charles E., root development of ponderosa pine transplants at Lincoln, Nebr.....	14326
Body weight, food and your weight.....	19078	Boldt, Robert F., optimum computerized allocation system.....	13687
Boe, Kenneth N., tractor-logging costs and production in old-growth redwood.....	8680	Bollinder, E. Folke, geometric study of coherence properties of partially polarized electromagnetic radiation.....	17007
Boehls Butte quadrangle, Idaho, anorthosite and associated rocks.....	805	Bolivia:	
Boeing Company:		agricultural commodities, agreements.....	7775, 9510, 15110
Bomarc A weapon system, overstated cost estimates included in target prices of incentive contracts, Air Force Dept., GAO report.....	12492	aviation transport services, agreement.....	7792
unnecessary cost in leasing of electronic data processing systems, GAO report.....	10618	economy, basic data.....	866
Bogdan, Leonard:		foreign trade regulations.....	4858
measurement of radiative heat transfer with thin-film resistance thermometers.....	9532	investment guaranties, agreement.....	11637
resistance thermometers for heat transfer measurement.....	9531	Boll weevils, see Weevils.	
Boggs, Maywood, testimony, hearings.....	6526	Boller, Kenneth H., effect of elevated temperatures on strength properties of reinforced plastic laminates.....	7955
Boggs, Thomas H., private trade barriers and Atlantic community.....	10150	Bollers, Thomas B., and wife, relief.....	311, 1899
Bogner, R. L., double isotope derivative analyses for food additives.....	5974	Bollinger, Loren E., formation of detonation waves in hydrogen-oxygen mixtures.....	9604
Bogue, David L., relief.....	12200	Bollman, Wendel, engineering contributions.....	21798
Bogumill, John P., financial procedures under Public Law 480, emphasis on titles 1 and 4 of Agricultural trade development and assistance act.....	12318	Bollworms, temperature and rainfall as they affect corn earworm damage to dent corn.....	20806
Bohall, Robert W., packing mature green tomatoes in Lower Rio Grande Valley.....	23029	see also Pink bollworms.	
Bohannon, Billy, prestressed laminated wood beams.....	8672	Bolometers, insertion-loss tester, improved.....	14824
Bohemia:		Bolometric corrections, see Stars.	
moldavites, Czechoslovakian study, west, interpolation error determination of astronomic-geodetic plumb-line deflections in West Bohemia Kraj, Czechoslovakia.....	2906	Bol'shaya meditsinskaya entsiklopediya (Russian encyclopedia): translations.....	2581, 2806, 2814, 18419, 20136, 21599
		Bolt, Charles D.:	
		increasing storage capacity in older cotton warehouses.....	9912
		transporting bales of cotton with large clamp trucks.....	20901

# INDEX 1964

Entry	Entry
Bolt, Charles D.—Continued	Bonham pipeline, design and construction, technical report.....
weighing bales of cotton at com- 11736	21862
press ----- 17478, 19373	Bonito Pueblo, architecture, general information ----- 20793
Bolts and nuts: 15968	Bonner County, Idaho, ground water. Bonnerjee, Biren, index to bulletin 1-100, Bureau of American Ethnology, etc.----- 4272
laminated Douglas fir bolts used in joints, performance----- 8674	Bonneville Dam, fish passage report..... 613, 17936
mine roof bolt behavior resulting from nearby blasts----- 9501	Bonneville, Lake, Quaternary glaciers relation to rises and falls----- 15930
Bomarc, see Missiles.	Bonneville Power Administration: appropriations, 1965----- 12119
Bomb reactors, see Reactors.	hearings ----- 12095, 15767
Bombing airplanes, see Airplanes.	bibliography, 1930-63----- 19271
Bombs, see Atomic bombs.	generation and sales statistics----- 8098
Bonavito, N. L., determination of mean elements for Vinti's satellite theory ----- 13237	calendar year 1963----- 19272
Bond, Deborah T., coverage of agricultural workers under State and Federal labor laws----- 13032	fiscal year 1964----- 17410
Bonded warehouses, cigars manufactured of imported tobacco, amend Tariff act, report----- 8313	marketing area, define----- 17597
Bondelid, R. O., phenomenological characteristics of (p, $\gamma$ ) resonances ----- 5616	law ----- 2089, 17597
Bonding:	BONUS power station, see Nuclear reactor power plants.
fidelity bonding under welfare and pension plans disclosure act----- 21656	Bonus system:
provisions of Federal labor laws----- 4492	code of Federal regulations----- 10533
hearings ----- 15498	machine building industry, USSR study ----- 6940
see also Bonds of officers, etc.	Book stores, see Stores.
Bonding materials:	Bookbinders, examination announcements ----- 4396, 19327
new method forms bond line free of voids ----- 21745	Bookkeepers, employment outlook----- 9415
oxide-fiber (whisker) reinforced metals, bonding ----- 7660	Bookkeeping machine operators, employment outlook ----- 9415
stringent cleaning technique assures reliable epoxy bond----- 14830	Books:
Bonding of materials, mechanism, between tungsten and stainless steel substrate, analysis----- 20593	American agricultural, in print, list ----- 1489
Bonds:	book of the future, USSR study----- 14522
prices ----- 3816	copyrighted, catalog of copyright entries ----- 8458
sales for water and sewer, 1963----- 16847	Federal item identification guides for supply cataloging----- 12296
Virgin Islands general obligation bonds, authorize issue, law----- 269	supplements ----- 3477
see also Savings bonds.	Library of Congress-----
Bonds of officers, etc., Federal employees, report 1963----- 17888	author catalog ----- 3768
Bonds of United States:	subject catalog ----- 3677
4 percent Treasury bonds----- 16897	stellar astronomy, USSR study----- 9095
1969 ----- 5730	telecommunications, new, USSR, announcement ----- 21573
4 1/2 percent Treasury bonds of 1973 ----- 16898	United States, translated into Spanish and Portuguese, bibliography ----- 1391
4 1/2 percent Treasury bonds----- 5731	see also Textbooks.
1975-85 ----- 16899	Bookshelf of community aids series----- 1755, 13662, 15256
1987-92 ----- 11672	Boolean algebra, see Algebra.
4 1/2 percent Treasury bonds of 1974 ----- 11672	Boolean functions, see Mathematics.
see also Government securities----- Savings bonds.	Booms:
Bone marrow, see Marrow.	apparatus of small size can be extended into long, rigid boom----- 13167
Bone tumors, see Tumors.	folding, placing scientific experiments 25 ft. from spacecraft----- 5505
Bones, James T., wood processing in Alaska, 1961 ----- 8695	metal strip, rolls up for compact storage ----- 13205
Bones:	why are booms dropped? ----- 1365
autogenous transplants in treatment of osseous defects----- 15242	Boone, Maryellen, relief----- 8282
bone diseases, USSR studies----- 10775	Boone County, W. Va., economic development opportunities----- 8017
cancer, health information ----- 1559	Boosters (rocket), see Rockets.
dogs, Sr-90 distribution after single and long-term administration, USSR study ----- 1251	Booton, Richard C. Jr., demodulation of wide-band frequency modulation by phase-lock technique----- 13212
grafting, Soviet studies----- 16397	Boots and shoes:
long bone regeneration, observations of chondrogenesis, USSR study ----- 2476	footwear and leather, series, report ----- 3117
surgery techniques, USSR study----- 9123	general repair, technical manuals----- 1765, 11848
vascular grafts, USSR articles----- 20175	leather footwear, comfort factors ----- 3117
Bonfills, Harry F., automatic data processing in Federal Government, its manpower requirements ----- 2942	Massachusetts shoe manufacturing, wage chronology----- 20432
	Navy's refusal to accept standardized officers' dress shoes, GAO report ----- 2407

	Entry
Boots and shoes—Continued	
shoe-fitting X-ray machines, health hazards	18901
shoes and slippers, current industrial reports	167-168, 3390
Borczon, Wieslawa M., relief	10198, 13865, 14043
Bordas, Diego, testimony, hearings	8456
Border Patrol, Immigration and Naturalization Service, origin and work	4828
Boreholes:	
deformation gage, device for placing in horizontal hole	21714
deformation method of stress determination	9517
stress field within core stub	11344
Boren Clay Products Co., relief	2138, 17234
Borghesi astronomical clock	21797
Borhani, Nemat O., recent changes in CVR disease mortality in California	11570
Borides, see Titanium borides.	
Bormuth, W. D., production of manufactured dairy products, 1963	16885
Borneo, south, southeast, and east coasts, sailing directions	18841
Boron:	
methods used in preparing	18132
minerals yearbook chapter	18659
scrap recovery by pyrohydrolysis	8062
Boron filaments, potential applicability in deployment of large radio reflective satellites, re-entry structures, etc., pertaining to space flight, evaluation	18721
Borowitz, Joseph L., urinary catecholamines in motion sickness, etc	1742
Borrowing, see Loans	
Borrowman, S. Ralph, solvent extraction recovery of thorium and yttrium from siliceous Colorado ores	13133
Bortz, Nelson M., remarks, Aug. 10, 1964	16576
Bosnia-Herzegovina, People's Republic, agriculture, regional aspects	18352
BOSP series	202
BOSR series	15335
Bostick, Edwin M., testimony, hearings	6526
Boston, Mass.:	
air traffic control center, automatic data processing operations, inadequate administration by FAA, GAO report	8723
harbor, engineer report—	
departmental edition	8522
document edition	8249
housing, civil rights report	1838
occupational wage survey	7405
principal electric facilities, map	673
property in South Boston to be conveyed to Massachusetts Port Authority, remove conditions—	
law	17420
reports	17525, 17829
real property acquisition practices and adequacy of compensation, hearings	14016
research and field laboratory for water pollution control	11573
services for senior citizens, hearings	12249
Bostwick Park project:	
construction, etc.—	
hearings	6360, 12137
law	17426
reports	15493, 17797
Boswell, Victor R.:	
growing table beets	5829
pepper production	5818

	Entry
Botanic Garden:	
appropriations, 1964, legislative—	
law	1978
report	337
appropriations, 1965, legislative—	
hearings	15794
law	17313
reports	8334, 15699
grounds, vehicular tunnel, locate under certain parts, authorize—	
hearings	12280, 15821, 17664
law	15398
reports	10224, 12065, 14092
Botanical Garden, Pacific Tropical, see Pacific Tropical Botanical Garden.	
Botanical gardens of China	2637
Botanical Institute Imeni V. L. Komarov, Academy of Sciences, USSR, work of scientific seminar of section of geobotany	12993
Botany, U.S.S.R. articles	10910
see also Phytogeography.	
Bothnia, Gulf of, lights and fog signals, list	13312, 16781, 21817
Botrytis, onion neck rot, relationship of fungicides and field spacings	20900
Botts, Ralph R., farmers' handbook of financial calculations and physical measurements	7911
Boulard, Heber D., selecting best capacity of truck receiving facilities for country grain elevators	13592
Boulder, Colo., normal phase variations of 18 kc/s signals from NBA observed	11436
Boulder County, Colo., convey certain lands to W. F. Stover	6268
BOUMAC, macro-programming system for scientific computation	5549
Bouncing, molecular bounce-back, test device for preventing	14812
Boundaries:	
International boundary studies. 7762-87, 9799-9800, 11622, 15099-15101, 18958.	
studies—	
Afghanistan-U.S.S.R.	7764
Burma-Laos	15100
Cambodia-Laos	15099
China-Laos	15101
Germany-Netherlands	11622
Iran-Turkey	7766
Iran-U.S.S.R.	7763
Iraq-Turkey	7765
Laos-Vietnam	18958
Mali-Mauritania	9799
Northern-Southern Rhodesia	9800
Norway-U.S.S.R.	7762
Turkey-U.S.S.R.	7767
waters, pilotage services on Great Lakes and St. Lawrence River, agreement with Canada	3162
Boundary layer:	
and velocity on bodies of revolution, methods for computing flow distribution	7815
cones at speeds to 24 km/sec	18786
control by blowing on NACA65, -424 airfoil to effect drag reduction, wind-tunnel investigation	16692
free-convection flows, stability	3032
laminar and turbulent, around 2-dimensional and axisymmetric bodies with suction or blowing, calculation	21910
laminar binary gas, with high rates of injection, heat-transfer measurement	20600



Entry	Entry
Boundary layer—Continued	Boxing professional undercover activities monopoly aspects hearings 14150
laminar compressible, general solution stagnation region of blunt bodies in axisymmetric flow 18734	Boy Scouts of America: report 1963 10174
laminar displacement effects on hemisphere in helium flow 9587	soil and water conservation activities 16964
ogive cylinder velocity profiles and skin friction drags due to surface roughness 3023	Boyd, Alan S.: remarks—
rotating spheres and other axisymmetric shapes 20614	Jan. 22, 1964 4364
similar solutions of equations for purely viscous non-Newtonian fluids 11396, 14849	Feb. 14, 1964 6063
transition and heat transfer, effect of controlled surface roughness at Mach numbers of 4.6 and 6.0 11378	Boyd, Raymond J., development of young western white pine plantations 18063
transition of wing-body-tail configuration, effects of distributed roughness height 13245	Boyd, W. K., phenomenon of hot-salt stress-corrosion cracking of titanium alloys 21730
turbulent—	Boyer, William D.: development of long leaf pine seedlings under parent trees 8693
effects of compressibility and heat transfer on laminar sublayer 20584	longleaf pine seed dispersal 2387
effects of transpiration through angled slots on development, heat transfer and recovery factor on sharp cone with foreign gas injection 9593	longleaf seed losses to animals on burned seedbeds 18075
heat transfer measurements on flat plate and attached protuberances 20589	Boyle, James R.: mineral industry of—
noise as related to design criteria for high performance vehicles, two-dimensional boattailed bodies afterbody pressures at Mach 5.98 14882	North Carolina 21703
wall pressure fluctuations and pressure-velocity correlations 9614	Tennessee 1424
Boundary value problems, solution on B. G. Galerkin's method 9626	Boys, vigor, exercise plan 11539
Bourbon, August J., implementation of cargo preference laws, report 6464	Brachyopods: fossils in Ordovician tufts, north-eastern Maine 14338
Bourbon whiskey, see Whiskey.	from Eniwetok and Bikini drill holes 15945
Bourdeau, R. E., Explorer VIII satellite measurements in upper ionosphere 13222	Bracken fern: livestock poisoning in Western States, reducing losses 20915
Bourke, Roger D., theoretical and experimental study of superconducting magnetically-supported spinning body 20529	supplemental treatments to aid planted Douglas-fir in dense bracken fern 12465
Bouvier, Joyce M., and daughter, relief 308, 1907	Brackett, Jean C., intercity differences in family food budget costs 2970
Bovill, Idaho, clay and sand deposit, geology, etc 5480	Brackett, Joseph A., labor law and practice in Ecuador 5433
Bovine peritoneum use in treatment of burns, USSR 5002	Braddock, William A., geology of Jewel Cave SW quadrangle Custer County, S. Dak. 2411
Bowen, Lee, USAF airborne operations 4264	Braden, R. C., development of materials property data processing system 4225
Bower, C. A., diagnosing soil salinity, Fort, National Historic Site, see Fort Bowie National Historic Site.	Braderman, Eugene M.: addresses—
Bowles, Otis R., relief 6164, 6411	Nov. 25, 1963 861
Bowlsby, Clyde C., soil survey report, Tillamook area, Oreg. 20803	May 20, 1964 11971
Bowman, Howard S., nomogram for $a+jb$ , etc 20643	May 21, 1964 11968
computing $c+jb$	July 29, 1964 15372
Bowman, Malcolm C., persistence of telodrin and DDT on sweet corn as determined by gas chromatography 13564	Oct. 6, 1964 19346
Boxelder, see Maple.	Bradford, J. N., optical tests on ruby samples 13346
Boxes:	Bradley, Edward, geology and groundwater resources of southeastern New Hampshire 19794
fiber, corrugated, single-wall, double faced, Federal standard 689	Bradley, James E., laser materials, tutorial review with bibliography 20519
fiber, solid, Federal standard 2330	Bradley, Mrs. Johnson, land and improvements, compensation 1919, 2174
fiberboard, etc., Federal standard 2329	Bradley, Nell B., disabling work-injury experience of oil industry and natural gas industry in United States, 1963 18663
folding paperboard Federal standard 12409	Bradley County, Ark., geology and groundwater resources 12528
	Brady, A. H.: phase variations of 18 kc/s signals observed at—
	Boulder, Colo. 11436
	Frankfurt, Germany 3052
	Maul, Hawaii 9636
	Brady, Hugh M., relief. 12035, 15622, 17181
	Braham, Randolph L., education in Rumanian People's Republic 10461

# JANUARY-DECEMBER

	Entry
Brala:	
bioelectrical activity of cerebrum, effect of indopane, USSR study	2857
cat, morphological changes following closed cranio cerebral injury associated with radiation sickness, USSR study	7320
cerebral hypoxia in response to gravity effects while breathing oxygen, USSR study	1238
cerebral proteins under excitation of nervous activity, changes in physico-chemical properties, USSR study	10739
chemistry of function, USSR study	10771
cortical neurons, possibility of division, USSR study	5004
extirpation of cervical lobes, structural changes in visual analyzer, USSR study	12757
lesions, USSR studies	21499
neurons, mathematical methods for investigation of impulse activity, USSR biophysical study	10881
research and cybernetics, USSR study	5136
structures, interaction mechanisms, USSR study	9221
tissue, effect of fractional X-ray irradiation on activity of hexokinase and aldolase, USSR study	16308
tumors, diagnosis with Ural-1 computer, USSR study	12710
see also Electroencephalography.	
Brake lining, kits, improper disposal, Army Department, GAO review	18089
Brakes, see Metalforming brakes.	
Bramlett, David L., estimating sound seed per cone in shortleaf pine	18074
Brannan, Paul J., relief	6225, 6421, 8190
Branded merchandise, uneconomical practices relating to brand name procurements by FSS, GAO report	12494
Brannigan, Francis L., radiation in perspective, illustrated text of film lecture	4310
Braski, David N., relative susceptibility of commercial titanium alloys to salt stress corrosion, etc	1460
Brass:	
mills, scrap and metal consumption and stocks, mineral industry survey, monthly	3284
scrap, consumers, mineral industry survey, monthly	3373
Brassieres, current industrial reports	17089
Braun, J. F., parachute clustering	47
Bray, A. P., high power density development project interim report, etc	113
Bray, Richard S., piloted simulator study of handling qualities of supersonic transports in landing maneuver	9602
Brayton cycle, see Turbines.	
Brace, Ross D.:	
analysis of particular stochastic differential equation	12
data smoothing by analog computer	1681
particle-size distributions in Brownian motion	14
theoretical aspects of—	
droplet impact measurements	13
soil fumigant diffusion	15
Brazil:	
agricultural commodities, agreements	5702, 15121
contributions to Brazilian geology, nonferrous metal (series)	6796

	Entry
Brazil—Continued	
cotton	10583
economy, basic data	18172
defense, military assistance, understanding	9836
establishing business	4860
extradition, treaty report	424
foreign trade regulations	6844
forests and forest industries	18048
moths, genus Gonioterma, new and related species	7606
Russian scientific expedition in 1820's, forgotten records	7302
scientific cooperation with USSR	6987
technical cooperation agreements	9822-
	23
telecommunications, market for U.S. equipment	4337
uranium at Morro do Vento, Serra de Jacobina	18113
Brazing, see Solders and soldering.	
Brazos River:	
chemical quality of surface waters of basin	18149
natural sources of salinity	19793
Brazzel, William F., factors in workers' decisions to forego retraining under Manpower Development and Training Act	18610
Bread:	
baking, Army technical manual	4280
recipes, Army technical manual	13682
Breadwinners, family, their special training needs	7360, 11247
Breakage and damage in grocery warehouses and retail food stores	11770
Breaks Interstate Park:	
compact, amendment—	
law	19410
reports	15550, 17842
Breaks Interstate Park Commission:	
compact, amendment—	
law	19410
reports	15550, 17842
Breakwaters, Kahului Harbor, repair designs	8520
Breast, see Mammography.	
Breathing, see Respiration.	
Breathing apparatus:	
oxygen equipment, continuous functional testing	74
respiratory devices for protection against pesticides	15194
safe use of respiratory protective equipment in work in compressed air detection, and physiological effects of gases encountered	18706
Breathitt County, Ky., opportunities for economic growth	19197
Breckenridge, F. C., United States standard for colors of signal lights	18803
Breeding, see Cattle—Livestock—Swine.	
Breezes, see Winds.	
Breidenbach, A. W., identification and measurement of chlorinated hydrocarbon pesticides in surface waters	20758
Brelmyer, Harold F., paper, Aug. 17, 1964	15188
Brennan, John J., occupational wage survey, Scranton, Pa.	2064
Brennan, Robert J., longwall mining in Pennsylvania anthracite mine, use of steel props	7455
Brenner, Berthold, increase in automobiles with seat belts during year of program efforts	13407
Brenner, Edward J.:	
addresses—	
Aug. 3, 1964	16805
Aug. 11, 1964	18874
Sept. 19, 1964	20715

# INDEX 1964

Entry	Entry
Brescia, R., decay prediction of 1963-21 using naval space surveillance system observations.....	20712
Bretton Woods agreement act, <i>see</i> International Monetary Fund.	
Brewer, Harley, and wife, relief.....	2165, 21117
Brewer, Thomas K., economy of El Salvador.....	4856
Brian, P. L. T., temperature distribution in crystallization of undercooled liquids in cylindrical tubes.....	15974
Bribery:	
sporting contests, prohibit schemes—	
law.....	13866
report.....	2079
Brice, James C., channel patterns and terraces of Loup Rivers in Nebraska.....	12510
Bricklayers, employment outlook.....	13056
Bridge Canyon Dam, and reservoir, proposed, relationship to Grand Canyon National Park and Monument, general information.....	18929
Bridge of understanding (address).....	13821
Bridges:	
international bridge act of 1964, report.....	15759
over navigable waters, approve certain navigation practices, hearing.....	2235
suspension, technical manual.....	13680
<i>see also</i> names of bridges, or bodies of water to be bridged.	
Bridges (electric), <i>see</i> Electric bridges.	
Bridwell, Lowell K.:	
remarks—	
Sept. 18, 1964.....	19358
Sept. 28, 1964.....	19359
Brief cases, current industrial reports.....	3390
Brienza, Agnese, relief.....	2025, 6155, 6398
Brier, Glenn W., rainfall calendar cities.....	13628
Brigantine National Wildlife Refuge, general information.....	18001
Briggs, Benjamin R., boundary, etc., of geomagnetic field in solar wind.....	13253
Brighter future through job training—	610
Brimmer, Andrew F.:	
addresses, etc.—	
Nov. 13, 1963.....	226
Nov. 19, 1963.....	228
Mar. 18, 1964.....	8184
May 15, 1964.....	10128
Sept. 28, 1964.....	19354
Oct. 18, 1964.....	21064
Brines, from oilfields in east Texas, chemical analyses and electrical resistivities.....	11328
Brinkerhoff, Joris M., radioisotopes use as source of X-rays to develop Rayleigh scattering method for analysis of high Z atoms in low Z media.....	19254
Briquets:	
anthracite metallurgical, blast furnace fuel.....	7459
charcoal production in United States, 1961.....	2350
fuel, producers, 1961.....	1401
minerals yearbook chapter.....	18665
Bristles, René 41, constriction of wire brush skids, friction and wear property coefficients, investigation.....	19134
Bristol, Conn., redevelopment area, opportunities for economic development.....	11821
British Columbia:	
sailing directions, change.....	18836
snow survey and soil moisture measurements.....	18950
British Commonwealth, <i>see</i> Great Britain.	
British Guiana, technical cooperation, program, agreement with United Kingdom.....	18972
British Honduras, economy, basic data.....	14385
British Isles, <i>see</i> Great Britain.	
British Virgin Islands, economy, basic data.....	21084
Brittle fracture, <i>see</i> Fracture of metals.	
Brittle materials, prestressed monolithic and segmented brittle structures.....	21728
Broadcasting, <i>see</i> Radio broadcasting—Teletexting—Television.	
Brobst, Donald A., geology of Fanny Peak quadrangle, Wyo.-S. Dak.....	2412
Broccoli:	
caterpillar control in South.....	9939
varieties and culture.....	19066
Brody, Leon, remarks, June 25, 1964.....	14676
Brogdon, N.J., stability of riprap, etc., overflow embankments, Arkansas River.....	14212
Broilers, <i>see</i> Chickens—Poultry.	
Brokaw, Arnold L., mineralization associated with magnetic anomaly in part of Ely quadrangle, Nev.....	18122
Brombacher, W. G., bibliography and index on vacuum and low pressure measurements.....	13273
Bromine:	
minerals yearbook chapter.....	13102, 14731
turbulent air-bromine coaxial-flow experiment, correlation.....	7524
Bronas, Christiane A., relief.....	10370, 15446, 17193
Bronx Borough, <i>see</i> New York City.	
Brooding chicks with infrared lamps.....	9945
Brooke, M. M., common intestinal protozoa of man.....	15045
Brooke County, W. Va., coal, preparation characteristics.....	14746
Brooker, J. R., five years of voluntary fishery products inspection.....	8602
Brookhaven, N.Y., population, special census.....	15318
Brookhaven National Laboratory:	
AEC, inadequate rental rates for government-owned housing, GAO report.....	10605
studies of sites for nuclear energy facilities (series).....	19772
vicinity, Suffolk County, N.Y., water, chemical quality.....	19772
Brooking, Walter J., chemical technology, suggested 2-year post high school curriculum.....	21263
Brooks, Charles A., soil survey report, Ellis County, Tex.....	20808
Brooks, Gordon L., relief.....	6256
Brooks, Jackie L., relief.....	6256
Brooks, Lyman B., training hard-core unemployed.....	21274
Brooks, Tony T., relief.....	6256
Brooks Lake, sockeye salmon and related limnological and climatological investigations, Alaska, 1957, ecological studies.....	21318
Broom rust:	
fir, general information.....	15924
spruce and fir, effects.....	8675
Brooms, broom corn, duty, adjust rates, report.....	10266
Brosnan, Ann P., foreign trade regulations of Netherlands.....	10696

# JANUARY-DECEMBER

	Entry		Entry
Brotherhood of Railroad Signalmen, emergency board report.....	10478	Brucellosis: cause of decrease in natural resistance of irradiated animals to live vaccine, USSR study.....	12853
Brotherhood of Sleeping Car Porters, emergency board report.....	2290	eradication—activities in cooperation with States.....	4066
Brothers, Chester A., and wife, relief.....	19552	animal disease control activities, weaknesses, GAO report.....	12501
Brosa, Julius A., capacity of refrigerated warehouses in United States, October 1, 1963.....	18987	cooperation with States, summary.....	4064
Brotman, Herman B., older farm population, 1960-63.....	16922	State-Federal cooperative programs—maps.....	3370
Broussalian, Lucine, relief.....	10196	progress report.....	9921
Brown, A. D., research on high-temperature bearings.....	50	swine, validated brucellosis-free herds, list.....	15199
Brown, B. F., stress-corrosion cracking, etc.....	13342	USSR studies.....	2600
Brown, Briscoe B., Jr., transporter, liquid, rolling-wheel-type, 600-gallon, T-4 (RLT), final report.....	5726	Brucellosis vaccine, live, condition of persons inoculated, USSR study.....	20412
Brown, Clarence A., Jr., rocket vehicle for producing artificial meteors.....	11401	Bruder, Wallace A., nautical chart manual.....	8170
Brown, Dennis W., thrust systems for electric, etc., station drag cancellation.....	20578	Brugger, J. E., applications of radioisotopes to measurements of piston ring wear and evaluations of engine oils.....	1777
low-thrust orbit raising in continuous sunlight.....	9567	Bruns, V. F., tolerance of certain crops to aquatic herbicides in irrigation water.....	5863
Brown, Emma E., abstracts of USAPRO research publications, 1964.....	21007	Brush, chemical control.....	20918
Brown, Ernest A., electrical conductivity and density of molten systems of uranium tetrafluoride and thorium fluoride with alkali fluorides.....	18684	Brushes: Federal item identification guides for supply cataloging.....	12294
Brown, Gerald A., address, June 30, 1964.....	14960	supplements.....	3475
Brown, Gerald V.: magnetic fields of finite-length solenoids.....	7559	Federal standard.....	12410
superposition calculation of thick solenoid fields from semi-infinite solenoid fields.....	20616	Brushes (electric machinery): molybdenum disulfide-silver motor brushes have extend life, improved model.....	13191
Brown, H. E., voltage tunable filter for P-band communication receivers.....	13337	Bry, Gerhard, nine business cycle indicators for nine States.....	9478
Brown, Ingrid G. S., relief.....	448, 1867	Bryan, J. Ned, talent, State's resource, State's responsibility.....	4651
Brown, James K., hourly variation in fire danger in Lake States.....	12463	Bryan, Robert G.: occupational wage survey—Akron, Ohio.....	18638
Brown, Lawrence W., investigation of dynamic stability and control characteristics for transport cruising at Mach number 3.....	20607	Canton, Ohio.....	16597
Brown, Lester R., man, land & food, looking ahead at world food needs.....	567	Cleveland, Ohio.....	7400
Brown, Paul L., legumes and grasses in dryland cropping systems.....	7934	Dayton, Ohio.....	11281
Brown, Robert R., chlorination reactions investigation using C-14.....	9519	Toledo, Ohio.....	13063
Brown, Ronald D., stagnation-point heat transfer in arc-heated subsonic stream.....	14840	Bryant, Paul J., extreme vacuum technology and clean surface studies.....	14792
Brown, Sidney E., retail sales of broilers and meat as affected by price, display area, and newspaper advertising.....	14171	Bryce Canyon National Park, general information.....	14965
Brown, Thomas C., occupational mobility through MDTA training.....	16568	Bryozoa, see Polyzoa.	
Brown, Virginia M.: nomination—report.....	8442	Bubbles: forces acting on nucleate boiling under normal and reduced gravity conditions.....	16683
Brown Swiss cattle, see Cattle.	10367	growth on heating surface initiates cooling.....	11413
Brownian movements, particle-size distributions.....	14	Buchanan County, Va., coal carbonizing properties.....	5496
Browning, James C., continuous flotation of beryl from spodumene mill tailing.....	14748	Buche, Donald R.: nonlinear-averaging errors in radiation pyrometry.....	16711
Browse, see Forage plants.		radiometer-pyrometer for analysis of gaseous combustion products.....	16710
		Buckles, joins web straps quickly, adjusts easily.....	14827
		Buckley, Donald H.: evaporation rates for organic lubricants in vacuum.....	5517
		friction and wear of nickel-aluminum alloys and some sulfur-modified steel in vacuum to 10 <sup>-6</sup> of mercury.....	13235
		friction, etc., for polymer compositions in vacuum.....	3027



# INDEX 1964

Entry	Entry
Buckley, John D., evaluation of selected refractory oxide materials for use in high-temperature pebble-bed wind-tunnel heat exchangers.....	20615
Buckling, see Strains and stresses.	
Buckman, Robert E., twenty-two year results of precommercial thinning experiment in jack pine.....	18066
Buddhism, Chinese Buddhists protest persecution in Vietnam, translation.....	1113
Budge, Hamer H., nomination, hearing.....	14130
Budget Bureau:	
mission to provide direct staff assistance to the President.....	4322
what it is, what it does.....	15295
Budget of United States:	
estimates, submitted by the President, 88th Congress, 1st session.....	10351
House Appropriations Committee and budget process, references.....	10042
1965—	
Budget in brief.....	4319
departmental edition.....	4320
appendix.....	4321
District of Columbia—	
departmental edition.....	4320
document edition.....	4440
document edition.....	4439
appendix.....	4441
reduction proposals.....	6216
tight budget in expanding economy (address).....	19366
Budgets, see names of departments, etc.—Budgets (family and personal).	
Budgets (family and personal):	
family food budgeting for good meals and good nutrition.....	4204
food cost, intercity differences.....	2970
guide for young couple.....	16955
Buell, Donald A., ground-wind loads on launch vehicles.....	1455
Buffalo, N.Y.:	
Ansley Wilcox House acquisition, etc., report.....	2095
occupational wage survey.....	9466
post office, dedication ceremonies (address).....	20719
principal electric facilities, map.....	873
public schools, civil rights.....	10097
Buffalo Lake National Wildlife Refuge:	
birds, list.....	15023
general information.....	15924
Buhrer, Edna M., nematology literature list.....	17
Builders, hardware samples on file in Washington, D.C., chart.....	1648
Building:	
apartment construction, current problems.....	1212
college library building needs.....	6829
construction, higher education facilities, financial assistance, regulations.....	19620
construction reports—	
permits..... 158, 3353-54, 6037, 15307	
residential alterations and repairs.....	4346, 17084
hardware, engineer manual, appendix 1, samples on file in D.C., changes.....	6592, 19656
home construction, publications, price list.....	7686
housing—	
authorized in individual permit-issuing places.....	6037
new private units authorized in permit-issuing places, 1962—	158, 15307
Building—Continued	
labor and material requirements for private one-family house construction.....	14703
library services and construction act compilation.....	6570
materials—	
Federal item identification guides for supply cataloging.....	12292
supplements.....	3473
requirement for public housing construction..... 13072,	20436
trade associations and professional societies.....	148
milk and milk product equipment, guide for evaluating sanitary construction.....	20764
modern sewage treatment plants, how much do they cost? guide to estimating construction costs.....	20765
new housing units authorized by local permits.....	3353
new residential construction authorized in permit-issuing places.....	3354
permits, construction reports, announcement and order form.....	13747
protective construction, foreign research.....	7872
residential design, FHA 1963 honor awards.....	6632
sewage and water works construction, contract awards.....	18922
sewer construction cost index.....	11577
structural engineering, Navy design manual, change.....	3197
Ukrainian construction, news items, 1959-61.....	1144
urban renewal rehabilitation, minimum property standards.....	4699
USSR, construction and building materials industry, translations.....	1168, 6952, 8874, 10778, 12820, 16394, 18349, 20128, 20196, 20201, 20324, 21548,
working stresses for structural design, engineering manual.....	4664
Building and loan associations, mutual deposit guarantee corporation, tax exemption, hearing.....	15805
Building board, see Pulpboard.	
Building machinery:	
construction machinery and equipment, 1962.....	15297
construction machinery and equipment industry review of 1963, outlook for 1964.....	6013
construction machinery, current industrial reports.....	3391
current industrial reports—	
summary 1962, change.....	6039
summary 1963.....	17093
enlisted evaluation system MOS evaluation test aid for construction machine operator.....	20901
Federal item identification guides for supply cataloging.....	12289
supplements.....	3470
mobilization reserve stocks, uneconomical management by Navy Dept., GAO report.....	8734
USSR industrial development, translations.....	1146, 1277, 1311, 2544, 2721, 2817, 2917, 5048, 5053, 5071, 7180, 7314, 8958, 9333, 10732, 12784, 16101, 16339, 16426, 18546, 20293,
Building materials:	
requirements for private one-family house.....	14703
USSR, industry, translations.....	11208

	Entry
Building materials stores, see Stores.	
Building trades:	
employment outlook..... 7383-85, 9419-24	
fair employment and full employ-	
ment (remarks).....	1361
union hourly wage scales and em-	
ployer insurance, etc., pay-	
ments in 100 cities.....	7421
union wages and hours.....	13071
Buildings:	
administrative facilities, Navy de-	
sign manual, changes.....	3200
brick structure, scattered radiation	
from cobalt-60 source.....	15236
dangerous or unsafe, District of	
Columbia, removal, amend	
act.....	
law.....	17345
report.....	17715
Foreign Service, additional appro-	
priations.....	
law.....	17273
reports.....	13969, 15710
higher education facilities, finan-	
cial assistance, regulations.....	19629
Historic American Buildings Sur-	
vey, general information.....	1513
historic sites and buildings, national	
survey, general information.....	14975
maintenance of furniture and fur-	
nishings, Navy policy, pro-	
cedures, etc.....	15180
maintenance of structures at naval	
shore activities.....	5772
pole frames, wind stresses.....	18061
prefabricated structures, Federal	
item identification guides for	
supply cataloging.....	12292
supplements.....	3473
protective structures, shelter de-	
sign series.....	6071
radiation measurements, above and	
below-ground structures from	
fallout.....	5957
see also Office buildings—Public	
buildings.	
Bulgaria:	
Academy of Agriculture Sciences,	
organization.....	12967
Academy of Sciences—	
annual meeting.....	9292
Computer Center, general pur-	
pose digital computer develop-	
ment.....	12699
Institute of Organic Chemistry,	
tasks.....	7187
atomic reactor information.....	9154
biology and cybernetics.....	5277
Communist Party accountability	
and election meetings.....	2905
dentistry, long term development.....	7237
domestic trade, Socialist trans-	
formation and development.....	21428
East European legal journals, ab-	
stracts.....	1026, 5063,
9025, 12663, 14646, 16450,	21535
Geological Institute of Academy of	
Science, services, etc.....	5158
hydrology and hydrogeology tasks.....	5268
index-digest of decisions, 1949-62.....	19745
irrigated areas, regional breakdown	
on basis of indices of aridity	
and natural water supply.....	12951
modern teaching devices.....	21605
national atlas, brief description.....	16372
national defense and Army wel-	
fare.....	5039
physical geography, summaries.....	5040
provincial press, summaries.....	589,
1165, 2658, 4915, 5150,	5325,
6914, 7321, 8856, 9179, 10986,	11033, 11206, 12628, 12723,
12584, 12991, 14461, 14571,	19832, 19912, 19925, 19933,
19944, 20208, 20258, 20264	

	Entry
Bulgaria—Continued	
psychological conference.....	2934
Scientific Association of Neurology,	
Psychiatry, and Neurosurgery,	
activities report.....	12980
scientific-technical union.....	16557
soldiers, struggle for combat readi-	
ness and to educate conscien-	
tious and ideologically con-	
vinced soldiers (speech).....	5026
standard of living, development,	
translations.....	7288
Bull, William B., geomorphology of	
segmented alluvial fans in	
western Fresno County, Calif.....	10637
Bulldoze or disk to regenerate short-	
leaf pine in Kentucky.....	2388
Bulletins, see Farmers' bulletins—	
also names of departments,	
etc., issuing bulletins—also	
subjects.	
Bullets, see Shotguns.	
Bullfrog Hills, caldera, ore deposits.....	18133
Bullfrog quadrangle, Nev.-Calif.,	
geology.....	18133
Bullheads, Aral Sea, fortuitous set-	
tlement, and their relationship	
with acclimatized and native	
fish species, USSR study.....	10804
Bullitt, John C., statement, Nov. 13,	
1963.....	1642
Bulls:	
DHIA sire summary list, Ayrshire,	
Guernsey, etc.....	13568, 20899
registered progeny of AI sires,	
DHIA cow index list.....	9917
Bultman, J. D., force-area study of	
mixed films of trypsin and ovo-	
mucoid.....	20710
Bump, Gardiner:	
black francolin and gray francolin—	
summary of foreign game bird prop-	
agation and liberation, 1960-	
63.....	10580
Bunche, Ralph, world servant, biog-	
raphy.....	5735
Bundy, William P., nomination, hear-	
ing.....	522
Buntin, J. L., fresh fruit and vegeta-	
ble unloads in midwestern	
cities.....	5791
Burbank, Jeanne, morphology of	
PbO <sub>2</sub> in positive plates of lead	
acid cells.....	15007
Burch, Neil R., automatic GSR ana-	
lyzer.....	5898
Burchinal, Lee G., Cooperative Re-	
search and Demonstration	
Grants Program.....	20850
Burial:	
preneed service, hearing.....	19587
veterans, allowances, amend law—	
law.....	13907
report.....	14065
Burk, Sanger M. Jr., low-speed free-	
flight stability and drag char-	
acteristics of radially vented	
parachutes.....	9612
Burke, Harold J., relief.....	1917, 2163
Burke, J. Henry, Australia and New	
Zealand, citrus producers and	
markets, etc.....	765
Burke, John, statue acceptance, pro-	
ceedings.....	2131
Burke, Idaho, Star Mine, stress direc-	
tions, determining through rock	
joint analysis, etc.....	11320
Burks, Ye. S., meteoritics.....	14906
Burlap, bags, for handling and stor-	
ing pea beans.....	7884
Burley tobacco, see Tobacco.	
Burlington, Vt., occupational wage	
survey.....	13064

# INDEX 1964

	Entry		Entry
Burma :		Bush, Joseph C. :	
economy, basic data-----	4861	industry wage survey-----	5438
labor law and practice-----	16587	communications-----	20438
Laos boundary, study-----	15100	synthetic textiles-----	4243
Burner fuel oil, <i>see</i> Fuel oil.		Bushman, Kalahari, thermal and metabolic response to moderate cold exposure at night-----	4243
Burning does not control young hard- woods on shortleaf pine sites in Cumberland Plateau-----	14308	Business :	
Burnishing, <i>see</i> Grinding and polish- ing.		administrative management course program, topic-----	20782
Burnout conditions for single rod in annular geometry, water at 600 to 1400 psia-----	5960	agricultural marketing firms, rising depreciation of assets, some causes and implications-----	4612
Burns, Alfred J., apple marketing, re- view of economic research 1945-60-----	2262	aida, overseas investment-----	19827
Burns, C. D., laboratory and field study of epoxy-asphalt con- crete-----	6598	area redevelopment bulletin-----	3262
Burns and scalds :		business community and consumer affairs program (address)-----	11967
burn injuries, various aspects, USSR studies-----	934	business has never been better (ad- dress)-----	19352
burn sickness-----		census, 1958-----	
autoantibodies, specificity, USSR study-----	14473	link of establishment data and IRS corporation data-----	19306
pathogenesis and treatment, USSR study-----	10958	retail trade area reports-----	21026
training for hypoxia, effect, USSR study-----	1253	census, 1963-----	
burn treatment, USSR studies-----	2548, 8938	advance area reports, announce- ment-----	21023
dogs after thermal burn, change in interstitial water balance, problem, USSR study-----	14474	final area reports, announce- ment-----	21024
functional condition of kidneys and toxic properties of sera of ani- mals after repeated thermal trauma, USSR study-----	14468	hearings-----	8391
impairment of excretory function of kidneys, use of urea for treat- ment, USSR study-----	18231	manual of industry and product classification-----	6036
surgical intervention in injuries, USSR studies-----	1167	census publications, price list-----	13389
surgical treatment, USSR studies-----	9068, 9207	conditions, national summary-----	3767
thermal burns, interrelationship be- tween plasma loss, hemocon- centration, changes in circu- lating blood volume and blood pressure, USSR study-----	14472	construction work, protecting trees from damage-----	20910
treatment of deep burns, use of pro- teolytic enzymes, USSR study-----	20004	credit and assistance, code of Fed- eral regulations-----	6662
use of bovine peritoneum in treat- ment, USSR study-----	5002	cycle developments, report-----	3292
Burr, James J., protective services for older persons-----	6602	cycle indicators for 9 States-----	9478
Burr, Mildred P. :		do business in Kenya, Tanganyika, Uganda-----	6861
basic data on economy-----		doing business with National Park Service-----	13299
Ecuador-----	18171	downtown section of Washington, D.C., urban renewal, hearings-----	6349
Paraguay-----	6854	economic planning, USSR, new 5- year plan, problems of develop- ment-----	18564
Uruguay-----	4859	electronic data processing-----	
Burroughs, Edward R., jr., flow meter for measuring ground water seepage from road cuts-----	10589	peripheral equipment occupa- tions, suggested curricula-----	19631
Burroughs Corporation, unnecessary interest costs incurred by Gov't because of retention of over- payments, GAO report-----	10623	suggested techniques for deter- mining courses of study-----	8481
Burson, Z. G., measurements of fallout radiation in above-ground and below-ground structures-----	5957	enterprise statistics, 1958-----	184, 19306
Bury, Richard L., estimating past and current attendance at winter sports areas-----	12467	announcement and order form-----	153
Bushboom, Herbert J., influence of grain boundaries on high tem- perature strength of polycrys- talline solids-----	1527	establishing in-----	
Busby, Mark W., yearly variations in runoff for conterminous United States, 1931-60-----	2433	Argentina-----	10698
Buses, <i>see</i> Motorbuses.		Brazil-----	4860
Bush, Edgar G., use of solid circuits in satellite instrumentation-----	14836	Denmark-----	8825
		Ghana-----	8820
		Hong Kong-----	8817
		Malaysia-----	18175
		Mexico-----	18179
		Netherlands-----	8813
		New Zealand-----	2455
		Philippines-----	8819
		Spain-----	4852
		United Kingdom-----	12554
		export expansion program (re- marks)-----	11977
		farm business analysis, guidelines for suggested management-----	21265
		Federal activities, fallacies and dangers of proposed Liberty amendment-----	4510
		print as Senate document, re- port-----	4537
		firms, decision-making on research and development-----	9664
		future role on Negroes (remarks)-----	226
		government speaks to business (address)-----	13823
		guide to current business data-----	3561
		home businesses, bibliography-----	18943

# JANUARY-DECEMBER

	Entry
<b>Business—Continued</b>	
income tax returns, statistics, 1961-62	2449, 12548
indexes	3293
industrial prospects, information sources for locating	15256
international, publications, check list	14369
international trade, essential factor in economic health and security of our nation (address)	6119
large firms, salary structure characteristics, 1963	16612
leadership, and Neighborhood Youth Corps	21658
management, sales, etc., Government publications available	7682
news reports	3294
opportunities (remarks)	19278
overseas business reports	862-868,
2454-62, 8827, 4850-62, 6844-60, 8811-33, 10691-706, 12552-556, 14372-390, 15983-987, 18169-187, 19824, 21066-92	
publications, price list	7684
relationship with government (address)	6117
SBA disaster loans	20785
SBA's local development company loans, economic growth, job creation	18940
service check list, weekly	3295
small business—	
act of 1958, amend—	
hearings	2109
law	6175
reports	467, 4464
AID circular	3228
AID memo	3229
bibliographies	5678-82,
9764-67, 11604-607, 13441-445, 15079-80, 16857, 18943, 20786-789, 21867	
construction of pollution treatment works assistance, hearings, print additional copies, reports	2101, 2199
economic injury disaster loans for small firms—	
natural disasters	21865
product disasters	21866
Federal income tax reductions	20783
Government procurement practices and programs, hearings	12155
health maintenance programs	13447
how to obtain government contracts and subcontract work	1579
impact of dual distribution and related vertical integration, hearings	415, 6370, 8401, 12156
insurance and risk management	5684
intra-industry management program	3125
investment companies act of 1958, amendments—	
hearings	2109
law	6184
reports	466,
2097, 4482, 19571, 19579	
investment companies licensed by SBA	1581
investment program, hearings	14018
loans activities of SBA, need for better supervision and administration, GAO report	6772
management research summaries, list, supp	3128
management series	5683-84,
13446-447, 16858, 20790-791	
participation in Government procurement, 1963, conference	12283
problems, investigation, expenses, report	6460

	Entry
<b>Business—Continued</b>	
small business—continued	
products list circular	3940
profitable plant layout	20790
qualifying for Government contracts and subcontracts	3126
role in Government procurement, 1964, hearings	21244
SBA loans, credit requirements, loan policies, etc.	20784
small business and foreign trade, report	8330
softwood lumber standards, impact, hearings	21214
starting and managing series	3127, 7731
success and failure factors, course program	16855
tax guide, 1964	858
U.S. concerns with Puerto Rican affiliates, tax treatment, hearings	17892
statistics—	
biennial edition, 1963	152
Federal reserve chart book	3491
historical supplement	21312
weekly	3296
survey of current business—	
monthly	4071
weekly supplement	3296
taxes paid by firms marketing farm food products	6554
unrelated taxable income, amend Internal revenue code—	
law	15397
reports	8344, 14068
see also Commercial practices—	
Retail trade	
<b>Business and Defense Services Administration:</b>	
ER series	4326-34,
6002-25, 8099-8101, 15299	
official texts	3277
publications, list	11878
releases, BD series	3871
Business and public administration notes	3291
Business consolidations:	
bank mergers, Federal and State laws, compilation	4715
mergers and economic concentration in Douglas-fir lumber industry	14331
Business Economics Office:	
news reports	3294
press releases	3872
Business education, business and public administration notes	3291
Business machine mechanics, see Office machine servicemen	
Business men:	
how to do business with Defense Supply Agency	6543
recognizing export capabilities of U.S. firms (address)	4410
role in modernization of business and industry (address)	8180
State Dept. guide to key officers of Foreign Service posts	9801
views on East-West trade, compilation, print additional copies, report	19573
Butler, G. G., milk, production, disposition, and income, 1962-63	11650
Butler County, Ala., opportunities for economic growth	17022
Butt, B. A., materials evaluated as insecticides and acaricides at Brownsville, Tex.	9932
Butter, futures trading and open contracts	3547-48
Butz, William T., long-distance shipment of market milk	7931
Buying, see Purchasing	
BWR (boiling water reactor), see Reactors (atomic)	



## INDEX 1964

	Entry		Entry
Byers, David C., heavy molecule propellants in electron-bombardment thruster.....	16709	Caddis flies, <i>see</i> Flies.	
Byphenyl, <i>see</i> Diphenyl.		Cadets, <i>see</i> Aviation cadets—Military Academy, West Point.	
Byrer, T. G., development of magnesium-lithium alloys for structural applications.....	13154	Cadmium:	
Byrnes, Joseph B., Operation Upshot-Knothole, effects of atomic explosion on 2 typical 2-story and basement wood-frame houses.....	131	disposal from national stockpile—	
Byulet'en' eksperimental'ny biologii i meditsiny (periodical): translations.....	16142	hearing.....	10293
		law.....	13869
		reports.....	10253, 12207
		mineral industry survey, quarterly.....	3297
		minerals yearbook chapter.....	14732
		refining by amalgam electrolysis.....	7434
		silver-cadmium battery development program.....	20520
		Cadmium sulfide, heats and free energies of formation.....	16644
		Cadmium telluride, recombination radiation during excitation, USSR study.....	16022
		Caemmerer, H. Paul, Commission of Fine Arts, 1910-63, brief history.....	17993
		Cahn, Frances, United States experience in planning for needs of children, etc.....	7856
		Cain, Stephen M., transient changes in arterial lactic acid of dogs at 21,000 feet.....	9986
		Caira, Palmeria, and children, relief. Cairo, Egypt, OAU summit conference.....	15050
		Calamine quadrangle, Wis., geology. Calcasieu River:	20062
		salt water barrier system, cost sharing, engineer report—	
		departmental edition.....	614
		document edition.....	280
		Calces, pyrrhotite, sintering.....	1435
		Calcium:	
		and calcium compounds, minerals yearbook chapter.....	14733
		comparison of mineral excretion in arm and total body sweat.....	19223
		Calcium aluminates:	
		aluminum extraction in water, sodium hydroxide, and sodium carbonate solutions.....	20504
		hydrated, formation in lime-soda, sinter process.....	5482
		Calcium isotopes, radioactive, distribution, and excretion from bodies of healthy and lead-poisoned animals, USSR study.....	20417
		Calculating devices, inhibitor circuits, rate control devices and compilers, USSR studies.....	9329
		Calculating machines:	
		computing, current industrial reports.....	15310
		USSR equipment.....	16113
		Calculation of percentage points of F distribution.....	19161
		Calculation procedure for sand transport by wind on natural beaches.....	12337
		Calculations, <i>see</i> Numerical calculations.	
		Calculators:	
		nuclear play, aggressor forces during tactical exercises, Army field manual.....	10001
		veterans' benefits, print additional copies, reports.....	6313, 10395
		Calculus:	
		multi-value calculi, relationship to logic, USSR book review.....	5142
		transformational, in Russian language.....	20169
		Caldera, <i>see</i> Craters.	
		Caldernwood, David, use of reflective paints on rice storage bins.....	9909
		Caldwell, Donald M., recovery of lunar vehicles—geometric constraints on trajectories.....	5885
C-130E, <i>see</i> Airplanes.			
C-135B, <i>see</i> Airplanes.			
C.A.B., <i>see</i> Civil Aeronautics Board.			
C.C.L., <i>see</i> Coating and Chemical Laboratory.			
C.E.R.C., <i>see</i> Coastal Engineering Research Center.			
C.F.A., <i>see</i> Community Facilities Administration.			
C.F.S. series.....	691-695,		
2334-35, 3248, 3290, 3508-9,			
3512, 3541, 3556, 3699, 3701,			
3711-12, 3720, 3728, 3785, 3791,			
3798, 3814, 3983, 4035, 4042,			
4081, 4133, 4162, 6098-6701,			
8592-98, 10547-552, 12414-422,			
14263-266, 15912-915, 17994-996, 19714-720.			
C.R.P.L., <i>see</i> Central Radio Propagation Laboratory.			
C.R.R.E.L., <i>see</i> Cold Regions Research and Engineering Laboratory.			
CA series.....	11743, 20903		
CAA, <i>see</i> Civil Aeronautics Administration.			
CAB, <i>see</i> Civil Aeronautics Board.			
Cabbage:			
caterpillar control in South.....	9939		
insects control field experiments.....	13563		
Cabeza Prieta Game Range, mammals, list.....	10569		
Cabinets, bioclimatic, for simulating variable temperature, etc., design and operation.....	19051		
Cable, C. Curtis, Jr.:			
changes in quality and value of cotton bales and samples during storage.....	5837		
comparison of mechanically drawn samples with cut samples for evaluating cotton quality.....	9950		
Cables:			
Federal item identification guides for supply cataloging.....	12291		
supplements.....	3472		
<i>see also</i> Electric cables—Submarine cables.			
Cableways, tramways and suspension bridges, technical manual.....	13680		
Cabrillo National Monument, general information.....	11458		
Cacace, Allesandro A. R., relief.....	4451, 6143		
Cacao:			
and allies, taxonomic revision of genus Theobroma.....	16759		
foreign agriculture circulars.....	3520		
Caccianli, Giuseppe, relief.....	6270, 6384, 8203		
Cache County, Utah, Paradise quadrangle geology.....	19778		
Cache la Poudre River, lower basin, ground water investigations.....	6821		
Cache National Forest, extend boundaries, hearings.....	6336		
Cactus, cane, controlling with 2,4-DP.....	12468		

# JANUARY-DECEMBER

	Entry
Caldwell, Oliver J., Moscow in May 1963, education and cybernetics, interchange of Soviet and American ideas.....	17918
Caleca, Vito A., training guides in motivation for vocational rehabilitation staff.....	7834
Calendar of events in Library of Congress (periodical).....	3298
Calendar pads, Federal standard.....	687
Calendar stands, Federal standard.....	687
Calendars of business, see Court of Claims—House of Representatives—Senate.	
Calhoun, S. Fred, fretting corrosion reduction of greases.....	9688
Calhoun County, Ark., geology and ground-water resources.....	12528
Calibration:	
and test services of National Bureau of Standards.....	1493
contractor's system, evaluation handbook.....	19616
dynamic, pressure transducers.....	3046
instrument systems, precision, etc., evaluation.....	1496
mercury strain gauge.....	19148
Navy program—	
technical manual series.....	1530,
5623, 11497-525, 13355-366, 16802-804.	
technique at Standards Laboratory, Naval Weapons Bureau.....	13351-354
self-calibrating electrical measurement system, design, study.....	9687
tests, Langley hotshot tunnel, description.....	5511
universal ratio sets, modifications.....	18808
vibration transducers at amplitudes up to 20g.....	20547
volume ratio system for calibration of thermal-conductivity vacuum gage in range 10 <sup>-4</sup> to 1 Torr lower limit, errata.....	3006
watershed by using climatic data.....	8679
California:	
agricultural growers and USDA (address).....	5822
agriculture and USDA policy, relationship (address).....	5821
annual survey of manufactures, 1962, standard metropolitan statistical areas and large industrial counties, statistics.....	8104
area burned by wildfire in watersheds, 1940-59.....	8666
carboniferous cephalopods.....	15951
central, drive-in dairies, development, organization and operation.....	1707
climatic summary, 1931-52.....	15152
climatological data.....	3329
coast pilot.....	1850
cotton ginning costs at single-gin and 2-gin plants.....	5835
CVR disease mortality, recent changes.....	11570
diseases of Monterey pine.....	19750
drought effects along Pacific Coast, earthquake zone, statistical forecasting of annual seismicity in advance.....	10913
electric rate book.....	664, 12426
electronic data processing codes for wildland plants.....	8661
Federal aid highway program, rights-of-way activities of Public Roads Bureau, legislative and policy requirements, GAO review.....	6771
fishery products, wholesale dealers, list.....	721

	Entry
California—Continued	
Forest Service region 5, timber sales contracts, award, etc., GAO report.....	19752
fresh fruits and vegetables, interstate hauling by rail and truck.....	16959
hunters, forest fire prevention knowledge.....	8690
Indian affairs, review, hearing.....	403
Indian lands, rancherias and reservations, distribute, amend act—	
law.....	17278
reports.....	8382, 15721
labor organizations, reporting, register.....	16374
land exchange in Monterey County—	
law.....	17432
reports.....	17526, 17827
landings, fish and shellfish.....	3299
legal status of women.....	1662
mineral rights in land, convey to—	
law.....	1945
report.....	2190
minerals industry, minerals year-book chapter.....	2984
municipal waste facilities, 1962 inventory.....	8109
municipal water facilities.....	18914
northern Coast Ranges, stream hydrology related to optimum discharge for king salmon spawning.....	14357
northern, logging for water quality.....	8662
northern, surface-water hydrology of coastal basins.....	12526
nurseries, seedbed density and pine seedling grades.....	8667
offshore islands, travel expenses of Navy Department employees assigned to duty—	
hearing.....	17649
law.....	17397
reports.....	15328, 17747
police-minority group relations, civil rights report.....	1839
precipitation data, hourly.....	3578
proposed Whiskeytown-Shasta-Trinity national recreation area, report.....	1535
range vegetation, annual-type, then and now, changes in.....	8663
rice stocks and movement report.....	3500
snow zone lands, managing for water.....	8688
southern, geology and oil resources of eastern Puente Hills area.....	10641
southern, industry (address).....	6115
United States oil and gas lease no. Sacramento 037552-C, re-instate and validate.....	1868, 2162
weather stations, decadal census.....	15156
see also Central Valley project—	
Clear Lake National Wildlife Refuge—Tule Lake National Wildlife Refuge.	
Calligolda:	
genus Denticaryps.....	9652
Hawaiian acanthuroid copepods, parasitic on fishes.....	7602
Callipers, micrometer callipers, outside diameter to 12 inches, instrument calibration procedures, technical manual.....	11525
Callaghan, Edmund E.:	
anisotropic effects in helically wound superconducting solenoids.....	3031
azimuthal magnetic field of thick, finite-length, helical solenoid.....	14895
potential advantages of anisotropic superconductors in force-free solenoids.....	21757

# INDEX 1964

	Entry		Entry
Callahan, Joseph T., yield of sedimentary aquifers of Coastal Plain southeast river basins.....	6820	Camp, Thomas H., motortruck operating costs of farmer cooperatives.....	12358
Callahan, Philip S., basic semiconductor circuitry for ecological and behavioral studies of insects.....	15195	Camp Century movement record.....	6588
Callichthyidae, <i>see</i> Catfish.		Camp Ripley Military Reservation, geology and ground-water conditions.....	4813
Callinectes, <i>see</i> Blue crabs.		Campaign Expenditures, 1964, Special Committee to Investigate, House:	
Caloric cost and fluid and electrolyte balance in simulated subarctic survival situations.....	19140	appoint, report.....	15483
Caloric nystagmus, <i>see</i> Nystagmus.		expenditures, pay from contingent fund, report.....	17509
Calories, salmon diets, caloric levels, feeding studies.....	8623	Campaigns (political), <i>see</i> Elections.	
Calorimeters, improved gradient layer animal calorimeter.....	19185	Campanian age, <i>see</i> Cretaceous period.	
Calorimetry:		Campbell, John D., costs of ginning cotton by cooperatives at single-gin and 2-gin plants, California and Texas.....	5835
determination of bath temperature in electroslag process, USSR study.....	2754	Campbell, Proctor, training and services needed in agriculture.....	19091
efficiency of split-rib umbrella-type paraboloidal solar energy concentrator.....	7499	Campbell, Thomas T., reducing vanadium compounds in bomb reactors.....	7451
Calves:		Campgrounds, <i>see</i> Camps.	
calf crop, 1963.....	9839	Camphor, physico-chemical properties of brain colloids during excitation of nervous activity, USSR study.....	10739
on feed, Arizona and California....	3306	Camping, publications, list.....	9707
Camber (aircraft):		Campobello International Park, <i>see</i> Roosevelt Campobello International Park.	
design of surfaces of supersonic wings with arbitrary planforms, numerical method.....	14874	Camps:	
wings, monocoque and multiweb, flutter characteristics.....	1482	central Rocky Mountains, forest campgrounds, summer recreational use.....	12480
wings with cambered span having minimum induced drag, aerodynamic design.....	7556	national forests campgrounds, estimating number of visitors.....	12470
Cambodia:		Canada:	
labor conditions.....	1384	Alouette, 1st satellite.....	20534
Laos boundary, study.....	15099	aviation air traffic control, agreement.....	5706
specialists from USSR at Khmerv-Soviet Friendship Hospital at Phom-Penh.....	2602	boundary waters, Saint Lawrence Seaway, reimposition of tolls on Welland Canal, agreement.....	9811
Cambrian period, rocks of Pioche mining district, Nev.....	19789	carbon steel bars and shapes, determination of injury.....	18991
<i>see also</i> Trilobites.		Columbia River basin water resources, cooperative development, treaty and related agreements.....	21881
Cambridge, Ohio:		continental radar defense system, agreement.....	15123
consumer expenditures and income, 1961.....	11272	defense, civil emergency planning, agreement.....	3159
redevelopment area, opportunities for economic growth.....	11822	dental public health trends.....	9730
Camden, N.J.:		egg production tests, 1963 report.....	1686
aerial radiobiological measuring survey, ARMS-2, of area.....	111	establishment of long range aid to navigation (Loran-C) station in Newfoundland, agreement.....	21888
public schools, civil rights.....	6073	experimental communications satellites, intercontinental testing, agreement.....	9808
Cameras:		ice prediction curves for lake and river locations.....	17937
CAX-12 aerial reconnaissance, overpricing by Fairchild Camera and Instrument Corp., Syosset, N.Y., under Air Force Dept. contract, GAO report.....	8729	improvements in continental air defense system, agreement.....	13480
electromechanically operated shutter.....	9545	ionospheric research, agreement.....	15112
ground cameras and photo lab equipment.....	20949	labor offices, directory.....	9375
photo, on conveyors.....	5914	light lists and other marine aids, Great Lakes.....	8172
Cameron, R. A., jr., radiation shielding and response studies of AEC test structures.....	5992	northern, sailing directions, change-peat moss, determination of no injury or likelihood thereof to U.S. industry.....	9847
Cameroon, <i>see</i> Cameroun.		pilotage services on Great Lakes and St. Lawrence River, agreement.....	3162
Cameroun:		political subdivisions, motor fuel taxation compact, consent of Congress, report.....	17733
foreign trade regulations.....	21073	radio star scintillation over Canada during July 20, 1963 eclipse.....	19153
French, official publications 1946-58, guide.....	11306	research studies completed, list.....	7758
Cammissa, Generoso B., relief.....	1866		
Camouflage:			
aluminum finish, high temperature non-reflective erosion resistant.....	18869		
deceptive pricing, guides against.....	4726		
Camp, John D., calorimetric efficiency of split-rib umbrella-type paraboloidal solar energy concentrator.....	7499		
Camp, Paul F., properties of ice.....	12345		
Camp, Ruth D., Bureau of Ships Technical Library thesaurus of descriptive terms and code book.....	20779		

# JANUARY-DECEMBER

	Entry
Canada—Continued	
research studies in progress, list----	9794
Roosevelt Campobello International Park, establish—	
agreement -----	20830
law -----	13911
reports -----	12085, 12245
St. Lawrence Seaway—	
suspension of tolls on Welland Canal, agreement-----	11640
tariff of tolls, agreement-----	18971
sea scallop industry-----	2338
social science research studies in progress, list-----	20814
steel reinforcing bars, determination of likelihood of injury-----	9848
trade in manufactured products, 1961-62-----	14392-394
winter maintenance of Haines Road, agreement-----	11632
Canada thistles, <i>see</i> Thistles.	
Canada-United States Interparliamentary Group:	
7th meeting—	
House delegation report-----	15540
Senate delegation report-----	12265
Canadian border to Eureka, Calif., coastal warning facilities charts-----	5735, 11685
Canadian River project:	
recreational facilities at Sanford Reservoir area, construct, operate, and maintain—	
law -----	17395
reports -----	332, 17779
Canadian-United States, Joint Committee on Trade and Economic Affairs, <i>see</i> United States-Canadian Joint Committee on Trade and Economic Affairs.	
Canadian Universal and International Exhibition:	
United States participation, appointment of commissioner general, authorize—	
law -----	19394
reports -----	15708, 17520
Canal Zone:	
Barro Colorado Island, phytophysiological reconnaissance-----	3130
geology and paleontology-----	6803
labor organizations, reporting, register-----	16573
military personnel of U.S., ordered to, helpful hints, DA pamphlet-----	21000
mineral industry, minerals yearbook chapter-----	20491
Panama Canal, code of Federal regulations-----	6677
public school finance program, 1962-63-----	4635
Canal Zone Biological Area:	
appropriation authorization, amend act-----	12282
hearing -----	15691
report -----	
Canal Zone Government:	
annual report, 1963—	
departmental edition-----	19281
document edition-----	19449
delinquent accounts receivable due from Republic of Panama at Nov. 30, 1963, GAO report-----	12488
employees, compensation claims appeals—	
law -----	17307
reports -----	15517, 17731
personnel, air accommodations, 1st class, GAO report-----	10598
rules and regulations governing navigation of Panama Canal and adjacent waters-----	6026

	Entry
Canals:	
irrigation and drainage, chemical control of waterweeds-----	1677
second canal connecting Atlantic and Pacific, site for construction, determine—	
departmental reports-----	19519
hearings -----	8440
law -----	19417
reports -----	8417, 15552
transitions for small canals, hydraulic design-----	11593
Canaveral, Cape, Ocean Breeze diffusion program, wind data, etc.--	5871
Cancer:	
anticancerous antibiotics, USSR study-----	7301
bone, health information-----	1559
carcinogenesis abstracts-----	3304
cells, radiation effect on RNA and RNA metabolism-----	14574
chemotherapy abstracts (periodical)-----	18813
chemotherapy, present status of problem, USSR-----	7216
chemotherapy reports (periodical)-----	3301
end results in cancer, evaluation program, general information-----	20649
induction, and control of cell division, symposium-----	13285
lung, health information-----	18903
malignant neoplasms, age-adjusted and age-specific death rates, 1960-----	15041
mammography guide-----	16836
mortality patterns among U.S. uranium miners and millers, 1950-62-----	15044
oral—	
and occupational health-----	20766
can you answer these questions?-----	18894
exfoliative cytology, Veterans Administration study, 1962-----	7828
smoking and oral cancer-----	16845
rates and risks, general information-----	20646
reading on cancer, annotated bibliography-----	16842
role of nucleic acids in differentiation and malignant degeneration, USSR studies-----	4904
services, facilities and programs in United States, 1962-----	3096
skin, health information-----	15050
subhuman primates, bibliography-----	18916
therapy, end results, international symposium-----	21792
uterine, USSR study-----	18249
virus research-----	11453
Candela, as unit of luminous intensity, establish, law-----	245
Candlepower, <i>see</i> Candela.	
Candy, <i>see</i> Confectionery.	
Canellis, Michael, guidelines for stroke rehabilitation program with model plan for community action-----	13399, 20749
Canker (disease of plants), <i>see</i> Nectria canker.	
Cannaday, Francis X., modulus of elasticity of rock determined-----	21709
Canned foods:	
report (periodical)-----	3302
strontium-90 in foods at intermediate stages of preparation-----	20770
<i>see also</i> names of classes of foods canned.	
Canneries:	
firms canning, list—	
alewives -----	743
caviar and fish roe-----	746
clam products-----	748



# INDEX 1964

	Entry		Entry
Canneries—Continued		Capital Transit Lines, Inc., relief—	318
firms canning list—continued		Capitalism, socialist and capitalist so-	
crab meat—	750	cieties development, USSR	
fish and shellfish specialties—	745	study—	21508
mackerel—	742	Capitol:	
oysters—	747	grounds, vehicular tunnel, locate	
salmon—	737	under certain parts, author-	
sardines, Maine—	738	ize—	
sardines, Pacific—	739	hearings—	12280, 15821, 17664
shad—	744	law—	15398
shrimp—	749	reports—	10224, 12065, 14092
tuna—	740	memorial tablet in honor of troops	
tunalike fish—	741	quartered in Capitol during	
Canning and preserving, can-drainage		Civil War, report—	17555
device to aid sample inspec-		pages, residence—	
tion—	6709	hearing—	546
Cannon, Helen L., geochemistry of		report—	14087
rocks and related soils and veg-		staff report—	10436
etation, Yellow Cat area,		police, employ additional person-	
Grand County, Utah—	21351	nel, report—	12069
Canoes and canoeing, bark canoes of		police, longevity benefits, preserve,	
North America—	20653	report—	17508
Cans, metal, current industrial re-		works of art in Capitol, print as	
ports—	3390, 10294	House document, reports—	17569,
Cantaloupes, <i>see</i> Muskmelons.		17823	
Canton, Ohio, occupational wage sur-		Capitol Page Facilities Board, create,	
vey—	16597	hearings—	17646
Canton Island, tracking station, agree-		Capitol Page School:	
ment with Great Britain—	1609	construction—	
Canvas, general repair for canvas and		hearings—	17646
webbing, Army technical man-		reports—	15530, 17575
ual—	17052, 21004	Capone, Benjamin R., magnetostatic	
Canyon de Chelly National Monu-		modes for measuring saturation	
ment, general information—	13296	magnetization of ferri-	
Canyonlands National Park:		magnetic materials—	9973
establish—		Caporaso, A. P., forest area and tim-	
hearings—	15592	ber volume in western South	
law—	19398	Dakota—	14320
reports—	17598, 17624	Capp, John P., underground gasifica-	
Capabilities, Waterways Experiment		tion of coal, 1945-60, bibliog-	
Station—	628-640	raphy—	5472
Capacitance, extrapolating 1 ke		Capsules, exploration of atmosphere	
values of secondary standards		of Venus—	14839
to higher frequencies—	1498	Capurro, Luis R. A., oceanographic	
Capacitance bridges, <i>see</i> Electric		vessels of the world—	9671
bridges.		Caravallano, R. L., notes on hydro-	
Capacitors, decade, Cornell-Dubilier		magnetics and plasma physics—	9969
CDA-5, instrument calibration		Carbaugh, Carol C., KC-135A heavy	
procedure, technical man-		weight 3-engine performance	
ual—	13356	test—	4232
Cape Cod National Seashore, general		Carbides, hard alloys, product of pow-	
information—	18825	der metallurgy—	4914
Cape Hatteras, N.C. to Brunswick,		<i>see also</i> Aluminum carbide—Molyb-	
Ga., coastal warning facilities		denum carbide—Niobium car-	
chart—	13520	bide—Tungsten carbide—Ura-	
Cape Hatteras National Seashore,		nium carbide.	
general information—	18826	Carbohydrates, variations of intake	
Cape Henry Memorial, general infor-		by rats, effect on characteris-	
mation—	14966	tics of growth—	9976
Cape Henry to Key West:		Carbon:	
coast pilot—	17151	blood clearance in mice, effect of	
supplement—	6107	low-temperature exposure—	4244
Cape Komala National Wildlife Ref-		burning in evolution of massive	
uge, general information—	697	stars after hydrogen exhaus-	
Cape Spencer to Arctic Ocean, coast		tion—	9613
pilot, supplement—	8171	determination of less than 10 parts	
Capillaries, classical, transport of		per million in tungsten—	21754
chemically reacting species—	3025	electrodes, porous, demineralization	
Capital:		of saline water by electrically	
European markets, description and		induced adsorption on—	8802, 10676
analysis—	6191	experimental techniques in investi-	
operating costs in packing mixed		gation of carbon-graphite ma-	
feeds with emphasis on labor		terials at 20 to 3200° C.,	
and capital—	9953	USSR—	21584
<i>see also</i> Investments.		filter for color removal from sur-	
Capital of United States:		face waters—	4242
airports, Federal aviation regula-		iron-carbon alloys, surface proper-	
tions, change—	2307	ties—	3037
careers, this is Washington, gen-		metabolism experiments, automatic	
eral information—	9373	computation and summariza-	
transit program for region, devel-		tion—	9919
opment—		particles simulation of bacterial in-	
hearings, supplement—	394	vasion of human gingival tis-	
report—	2039	sues—	8000
<i>see also</i> District of Columbia.			

# JANUARY-DECEMBER

	Entry
Carbon—Continued	
polytype-crystalline materials, absorption corrections for intensity of X-ray scattering.....	13131
Carbon black:	
mineral industry survey, monthly.....	3303
minerals yearbook chapter.....	20468
Carbon County, Mont., Bluewater Springs area, geology and water resources.....	15969
Carbon dioxide:	
chemical relaxation behind shock waves including interdependent dissociation and ionization processes.....	7529
control of content in air-supported plastic greenhouse.....	7891
flow properties of thermally perfect carbon dioxide and nitrogen mixtures, tables.....	11361
levels for controlled-atmosphere storage of apples.....	9949
liquid, refrigeration in frozen food trailer, test.....	8
sulfate cycle, removal and oxygen generation aboard submarines.....	13340
thermal radiation of CO <sub>2</sub> in atmosphere.....	14916
Carbon isotopes:	
C-14—	
absorption and secretion by fish, USSR study.....	8878
dating, preparation of water sample.....	802
use in investigating chlorination reactions.....	9519
Carbon monoxide:	
catalytic reduction with hydrogen, gaseous and liquid, thermodynamic property values from 70 to 300°K. with pressures to 300 atmospheres.....	14773
removal from, automotive exhaust using promoted uranium catalyst.....	3050
Carbon steel, <i>see</i> Steel.	1441
Carbonates, impurity in surface region of sodium chloride crystals.....	18762
Carbonates, rare metal masses, magnetometry for studying, USSR.....	18294
Carboniferous period:	
California cephalopods.....	15951
Lower, deposits of middle Tien Shan and Talas-Fergana fault, USSR study.....	5166
Carbonization:	
carbonizing properties of Letcher County, Ky., coals.....	9528
coal, Buchanan, Dickenson, Russell, Tazewell, and Wise Counties, Va.....	5496
pressure carbonization of coal to produce gas.....	11330
Carburizing and heat treatable steels, DI-2, DI-3, DI-3A (EP-176) and DI-4, USSR.....	21446
Carcharhinidae, <i>see</i> Sharks.	
Carcinogenesis, <i>see</i> Cancer.	
Carcinoma, <i>see</i> Tumors.	
Card, Michael F., bending tests of large-diameter stiffened cylinders susceptible to general instability.....	9589
Carden, Huey D.:	
technique for simulation of lunar and planetary gravitational fields.....	21774
vibration reduction on Nimbus spacecraft.....	18751
Cardenas, Ricardo M., <i>see</i> Navarro-Paz, Francisco.	
Cardiac activity, <i>see</i> Heart.	
Cardiac massage, <i>see</i> Heart.	
Cardiac output, <i>see</i> Blood.	

	Entry
Cardiology:	
dynamocardiography, USSR study.....	14914
recent advances, USSR.....	9085
synthetic electrocardiology, studies.....	12972
USSR study.....	21509
Cardiovascular-renal diseases:	
CVR disease mortality in California, recent changes.....	11570
morbidity among adult population, observations in Chernovtsy, USSR study.....	2643
synthesis of antihypertensive drugs, main trends, USSR study.....	2892
Cardiovascular system:	
circulatory system, guide.....	9710
condition in people working with radioactive compounds, USSR study.....	6998
diseases—	
field study in Evans County, Ga. mortality, 1960 data on national and State experience.....	11551
neurogenic origin, nomenclature, etc., USSR study.....	5647
EEG changes and artificial circulation during cardiac surgery comparison with postoperative neurological picture.....	11043
effects of refeeding stress following starvation.....	11234
functional state, and blinking conditioned reflexes, simultaneous study, USSR.....	7984
research, Israel.....	12924
surgery, Soviet literature survey.....	20647
Cards, <i>see</i> Catalog cards—Guide cards—Identification cards.	9267
Career staff to the President.....	4322
Careers, <i>see</i> Civil service—Occupations.	
Carefulness, test battery, validation against training school criteria.....	13633
Caretto, Albert A., Jr., nucleon 2 nucleon reaction cross sections at energies above 100 mev, literature survey.....	19241
Cargo, <i>see</i> Shipping—Ships.	
Cargo carriers:	
lighter, amphibious, resupply cargo, 15-ton, engineering report.....	11666
Marsh screw amphibian, trafficability tests on coarse and fine grained soils.....	6600
rolling liquid—	
transporters, emergency repair kit for tubeless tires.....	5722
transporter, rolling-wheel-type, 600-gallon, T-4 (RLT), final report.....	5726
transporters, unnecessary procurement, Army Dept., GAO report.....	19769
Cargo handling:	
Air Force system A/A32H-4, evaluation.....	7971
fresh approach to problem (remarks).....	20457
Cargo services, <i>see</i> Air carriers.	
Carhart, H. W., chemical research in atmosphere purification and control on nuclear-powered submarines.....	18863
Caribbean area, climatological data.....	3329
Caribbean forester (periodical).....	3305
Caries, <i>see</i> Teeth.	
Carleton, Nathaniel P., metastable atoms and molecules, studies using beam techniques.....	20935
Carley, D. H., flexibility of operation in dairy manufacturing plants, changes, 1944-61.....	21258
Carloading, military supplies, course outline.....	6546

# INDEX 1964

	Entry		Entry
Carlsbad Caverns National Park:		Carrigan, Anne L., geophysics and	
revise boundaries—		space data bulletin.....	20967
law.....	1977	Cars, <i>see</i> Freight cars—Railroad cars.	
report.....	4455	Carson, Peter, relief.....	235
Carlson, Harry W., numerical method		Carson Desert, southern, geology.....	10639
for design of camber surfaces		Carson, Port, airstrip, construction,	
of supersonic wings with arbitrary		report.....	353
planforms.....	14874	Cartels, <i>see</i> Trusts (Industrial).	
Carlton, Paul F., repetitive loading		Carter, Genevieve W.:	
model tests of prestressed rigid		address, May 9, 1964.....	11711
pavement on low strength subgrade		public welfare research, etc.....	20882
.....	12352	Carter, George J., benediction studies	
Carnations, quarantine import requirements		of Oregon coastal dune	
of Denmark.....	20905	sands for use as glass sand.....	16635
Carney, Samuel M., preliminary keys		Carter, J. R., floods in Wyoming, magnitude	
to waterfowl age and sex identification		and frequency.....	6800
by means of wing plumage.....	18030	Carter, Phyllis G., procedural report	
Carney, Terrance M., energy-optimal		on 1960 censuses of population	
trajectories in 3 dimensions		and housing.....	1827
for terminal phase of satellite		Cartographers:	
rendezvous.....	13251	examination announcement.....	10112
Carolinas Virginia tube reactor, <i>see</i>		discontinuance notice.....	4385
Reactors (atomic).		Cartography, <i>see</i> Maps and charts.	
Caroline County, Md., soil survey report		Cartons, folding, industry, review of	
.....	15091	1963, outlook for 1964.....	4328
Caroline Islands, free-living Copepoda		Casa Grande Ruins National Monument,	
.....	14961	general information.....	3060
Carp:		Case, Carl T., transient reflection and	
parasitofauna, effect of pond-raising		transmission of plane wave	
conditions, USSR study.....	4917	normally incident upon semi-	
toxicity of force-fed chemicals.....	6729	infinite anisotropic plasma.....	19170
Carpenter, Albert J., nomination,		Case, Clifford P., testimony, hearings	
hearings.....	4576	.....	12281, 14156
Carpenter, Kenneth S., halfway		Case recording in rehabilitation report	
houses for delinquent youth.....	4359	.....	20874
Carpenter, Lloyd:		Cases, <i>see</i> Brief cases.	
analysis of high-purity hafnium.....	7460	Casework in probation and parole,	
analysis of high-purity columbium		some considerations in diagnosis	
by optical emission spectrography		and treatment.....	10076
.....	11321	Caseworkers, <i>see</i> Social workers.	
Carpenter, Malcolm S., visual observations		Casey, John G., anglers' guide to	
of nightglow from manned spacecraft.....	1487	sharks of Northeastern U.S.,	
Carpenter, Robert J., portable rubidium-vapor frequency standard		Maine to Chesapeake Bay.....	10557
.....	11439	Cashiers, employment outlook.....	13054
Carpenters, employment outlook.....	9419	Casimir Pulaski (nuclear submarine):	
Carpenters and Joiners of America,		commissioning ceremony (address)	
United Brotherhood, <i>see</i> United		.....	16809
Brotherhood of Carpenters and		launching (remarks).....	5633
Joiners of America.		Casings, alloy for high-precision	
Carpenters' Hall, general information		parts, USSR investigation.....	16069
.....	5565	Caskie, Georgette D., relief.....	8281, 17190
Carpentry, Government publications, list		.....	15631, 17190
.....	11542	Casmalia, Calif., railroad accident.....	6867
Carpets:		Caspian Sea, fauna reconstruction,	
carpets and carpeting, current industrial reports		USSR study.....	7178
.....	15311	Cass, Millard:	
wilton, brussels, etc., Tariff Commission report.....	18996	addresses—	
Carquinez Strait, port.....	623	Dec. 11, 1963.....	7356
Carr, Ira A., Lake Erie explorations,		May 22, 1964.....	13028
May-Nov. 1960.....	14273	Sept. 14, 1964.....	20426
Carr, Francis, Powerhouse, <i>see</i> Judge		Cassell, John W., relief.....	15468
Francis Carr Powerhouse.		Cast iron:	
Carrese, Mariano, relief.....	1881, 2155	current industrial reports.....	3390
Carriers:		prerefining pig iron with vortex	
common carrier services, applications, FCC.....	3464	cone.....	9506
common, property, tax assessments,		white, spectrochemical NBS standards	
hearing.....	21208	preparation.....	14935
interstate commerce act, amendments		Castallani, John G., occupational	
hearings.....	6502-3	wage survey, Newark and Jersey	
report.....	6288	City, N.J.....	13066
interstate, water supplies, by States		Castillo de San Marcos National	
and Public Health Service regions,		Monument:	
inventory.....	7698	property condemnation, authorize—	
water, land, and air, role in export		law.....	17354
control.....	860	reports.....	15746, 17557
<i>see also</i> Air carriers—Aircraft carriers		Castings, <i>see</i> Castings.	
—Cargo carriers—Communications—Motor carriers		Castings molds, <i>see</i> Molds (forms).	
—Pipe lines—Railroads—Telephone		Castings:	
—Water carriers.		aluminum, development with high	
		impact strength at low temperatures	
		.....	13151
		ball-bearing steel, new casting	
		method, USSR.....	2758
		ferrous, industry, review of 1963,	
		outlook for 1964.....	6016

# JANUARY-DECEMBER

	Entry
<b>Castings—Continued</b>	
high temperature alloy casting, etc.	2704
intricate investment casting	2877
investment and chill casting, problems	14476
investment	2543
iron, current industrial reports	3390,
	10054
mechanical properties, increasing by thermal treatment of metal in liquid state	5913
mechanical properties of cast metal, USSR studies	16215
molds, expendable, for reactive metals	18692
nonferrous, current industrial reports	3390
press, defects, methods for prevention	80
properties of heat-resisting alloys, USSR study	12926
refractory metal, effect of individual features of technological process, USSR study	5378
squeeze casting of thin-wall parts, USSR study	12728
steel, continuous casting and open-hearth computer controls	9291
steel, current industrial reports	330,
	10054
USSR shop	2710
see also Molds (forms).	
Castle, R. A., simulation of helicopter and V/STOL aircraft, computational methods analog	21826
Castle, Stephen S., trucking and cartage	13445
Castle Clinton National Monument: commemorative medal, liberty series—	
law	6173
reports	460, 2094
Castro, Fidel:	
Castro's network in United States, Fair Play for Cuba Committee, hearing	538
cold route to power	2728
pro-Castro propaganda activities in U.S., hearings	416, 2127
Casualty Insurance, District of Columbia rate regulation laws, amend, hearings	10417
Catalina Properties, Inc.:	
relief	8408
veto message	17463
Catalog cards:	
Library of Congress—	
books, authors	3768
books, subjects	3677
motion pictures and filmstrips	3678
music and phonorecords	14718, 18651
Cataloging:	
AEC reports, report number series used by Technical Information Division	17059
cataloging handbook, H series	558-559,
	2251, 3497-99, 12288-297
cataloging manual M (series)	10444,
	21249
descriptive—	
Government scientific and technical reports, standard	9756
Library of Congress rules, phonorecords	11307
Federal aids to State and local governments, print additional copies, report	21189
service, bulletin	2975
supply cataloging, Federal manual, operating procedure	21249
Catalogs:	
Air Force Academy, Colo., 1964-65	11782
Atomic Energy Commission, engineering, materials list, index	8072
captioned films for deaf	572, 12320

	Entry
<b>Catalogs—Continued</b>	
census publications	3286
monthly supplement	3287
Coast and Geodetic Survey, nautical charts and related publications	11957
Commerce Department publications, 1963 supplement	17164
copyright entries	550,
	2249, 4595, 6528-30, 8458,
	10441, 12285, 14158, 15825,
	17893-894, 19609-610,
emergency health preparedness publications	18905
FDA, fakes and swindles in health field	19743
Federal aids to State and local governments	10421
print additional copies, reports	15681,
	17859, 19480
films, Agriculture Department	16944
films, Interior Department	12540
Government publications, monthly catalog	3731
Indian miniatures, from Archer collection	3055
Industrial College of Armed Forces	2467,
	12575
Joint Publications Research Service, current publications	883, 10718
Labor Statistics Bureau publications	16614
Library of Congress—	
books, subjects	3677
motion pictures and filmstrips	3678
music and phonorecords	14718, 18651
national union catalog	3768
subject headings, monthly supplement	4061
medical and veterinary zoology	19057
meteorological satellite data, TIROS V, television cloud photography	9882, 19026
Military Academy, West Point, 1964-65	16621
National Collection of Fine Arts—	
Turner watercolors from British Museum	3056
Venetian drawings from Correr Museum	3054
National Library of Medicine	13092
National Oceanographic Data Center publications	21811
Naval Academy, Annapolis	13307
Public Health Service, numbered publications, 1950-62	21854
stock number reference catalog	4725
stores stock catalog	4059
standard forms supplement	21315
supplements	690, 6694
upper air data, history and catalogue, 1946-60	9881
visual binary orbits	9669
Western Training Center courses, 1964	4374
Catalysts:	
iron, kinetics of Fischer-Tropsch synthesis	13103
iron, self-generated carbon-expanded for synthesis of methane	11331
metallic, interaction with cyclohexane, USSR study	14456
principles of modeling biocatalysts, USSR study	18386
uranium, use for removal of hydrocarbons and carbon monoxide from automotive exhaust	1441
Catalytic hydrocracking of polyphenyl systems for use in reclamation of organic nuclear reactor coolant	8059
Catalytic reduction of carbon monoxide with hydrogen	14773
Cataracts, hope through research	1558

Do not order from index; see indicated entry

Page 153



# INDEX 1964

Entry	Entry
Catecholamines:	Cattle—Continued
spectrofluorometric estimation,	forage and management in long leaf-
combination spectra dispersion,	slash pine forests..... 13583
USSR study..... 12795	hides, curing at lower costs and
urinary, in motion sickness and tur-	greater efficiency, guide..... 12308
bulent flight..... 1742	killing-floor systems and layouts..... 9952
Caterpillars, control on cabbage, etc.,	market, testing program, brucellosis
in South..... 9939	eradication activities..... 4066
see also names of caterpillars.	on feed..... 3306
Catfish, South American callichthyid	scabies eradication activities re-
genus <i>Corydoras</i> , new species	port, 1963..... 10
and redescrptions..... 20658	sold for slaughter, selected mar-
Cathartes aura, see Vultures.	kets..... 3306
Cathcart, James B.:	stocker and feeder, shipments..... 4034
economic geology of—	Cattle grub, how to control..... 5831
Plant City quadrangle, Fla..... 799	Cattle ranges, see Range lands.
Lakeland quadrangle, Fla..... 19775	Cattle scab, itch mite reported in
Catheters:	New Mexico and Texas..... 16937
catheter-tip flowmeter for measure-	Cattle ticks, fight against fever ticks..... 9961
ment of blood flow..... 17011	Cattlemen's associations, cattlemen,
right heart and pulmonary artery	competition, and USDA (ad-
implantation..... 8004	dress)..... 7915
Cathodes, physical bases of cathode	Cattolr, Francis R., molten-salt elec-
electronics conference, USSR	trorefining of uranium..... 18690
proceedings..... 16489	Caudill, Arley T., foreign trade regu-
Catholicism:	lations of Spain..... 14375
political and ideological adapta-	Cauliflower:
tion of Catholic Church, USSR	caterpillar control in South..... 9939
study..... 16192	varieties and culture..... 13066
Vatican under new Pope, USSR	Causes and prevention of failure of
study..... 11019	septic tank percolation sys-
Cats:	tems..... 14240
action potentials of vestibular	Cavalry (armored), see Armored
neurons, USSR study..... 18199	forces.
brain, morphological changes fol-	Cavanaugh, Joseph A., highlights
lowing closed craniocebral	from survey of psychiatric
injury associated with radia-	aides..... 11447
tion sickness, USSR study..... 7320	Caviar, see Sturgeons.
caloric nystagmus following rotary	Cavitation and effective liquid tenson
habituation..... 4315	of nitrogen in tunnel venturi..... 7510
cutaneous and motor analysors,	Cavity frequency meters 2.60 through
comparative chemoarchitec-	26.50 GC(KMC)..... 13365
tonics of functional groups of	Cawthorn, Joel W., soil survey report,
proteins in cortical nuclei,	Iredell County, N.C..... 18954
USSR study..... 12923	CCC, see Commodity Credit Corpora-
nystagmus responses to rotation	tion.
and directionally equivalent	CCL, see Coating and Chemical Labo-
and non-equivalent stimuli	ratory.
after unilateral caloric habitu-	CCP, see Communist Party of China.
ation..... 1790	Cecil soil, see Soils.
Cattle:	Cedar:
anaplasmosis, costly disease..... 11740	pinyon-juniper type of Arizona, ef-
beef and USDA (address)..... 5823	fects of grazing, fire and tree
beef cattle breeding..... 19064	control..... 16969
beef imports—	red, shingles, current industrial re-
and cattle industry (remarks)..... 7914	ports..... 11900
hearing..... 8355	western redcedar shingle tow, toxic
brucellosis eradication, weaknesses	effects on Douglas-fir seed-
in animal disease control activi-	lings..... 8656
ties, GAO report..... 12501	Cedar Banyon:
dairy—	flood control survey, authorize—
DHIA sire summary list, Ayr-	law..... 15392
shire, Guernsey, Holstein, Jer-	report..... 14089
sey, Brown Swiss and Milking	Cederstrom, Dagfin J., geology and
Shorthorn sires, Nov. 1963..... 5798	ground-water resources of An-
DHIA sire summary list, Ayr-	chorage area, Alaska..... 15964
shire, Guernsey, Holstein, Jer-	Ceilings, panel-type construction..... 18
sey, Brown Swiss, Milking	Celebes, sailing directions..... 18841
Shorthorn, and Red Dane sires,	Celestial background radiation..... 13626
May 1964..... 13568	Cell Culture Collection Committee,
DHIA sire summary list, Ayr-	animal cell lines registry..... 11571
shire, Guernsey, Holstein, Jer-	Cells:
sey, Brown Swiss, Milking	animal lines certified by Cell Cul-
Shorthorn, Red Dane, Red	ture Collection Committee, reg-
Poll, and mixed breed sires—	istry..... 11571
Mar. 1964..... 9018	animal, metabolic control mecha-
Aug. 1964..... 20899	nisms, symposium..... 13284
feeding practices, preliminary	chemistry problems, USSR study..... 1234
survey..... 9720	connection of nucleolus with chro-
foreign trade prospects..... 8628	mosomes, USSR study..... 16473
interstate movement, selected	effects of sound and nucleic ele-
States, 1963..... 9842	ments on, USSR study..... 20241
feeding shelter, building plan..... 19099	
finishing beef cattle..... 5826	

# JANUARY-DECEMBER

	Entry		Entry
Cells—Continued		Census—Continued	
histochemical and ultrastructural		economic—continued	
changes of receptor cells of		law -----	17391
uterine, altered gravitational		report -----	17793
field, USSR study -----	9111	governments 1962—	
human malignant tumor, radiation		announcement and order form....	4340
effect on RNA and RNA metabo-		final reports -----	4344,
lism -----	14574	15305, 11889-890, 19285-287	
normal and tumoral, fluorochrom-		Census:	
ized with acridine orange at		finances of county govern-	
different pH values, USSR		ments, announcement and or-	
study -----	7074	der form -----	11885
proliferation in adrenal of control		publication program, list -----	13771
and cold exposed rats -----	4247	topical studies -----	19287
prototype, operation in electrorefin-		housing, 1960, final reports -----	1806
ing beryllium -----	16639	machine-readable data available, in-	
radiosensitivity of inherited struc-		ventory -----	13769
tures of cells of mammalia in		machine-readable data and special	
vitro, USSR study -----	5033	tabulations available, inven-	
reaction to effects of extreme con-		tory -----	17112
ditions, USSR studies -----	4927	manufactures, 1958, industry re-	
regulation, current problems, Hun-		ports -----	1807
garian lectures -----	20087	manufactures, 1963—	
standard, unsaturated, cross-check		alphabetical list of manufactured	
procedure, technical manual -----	13355	products -----	4339
substance, changes from injury and		numerical list of manufactured	
excitation, USSR data -----	1148	products -----	11911
transport of chemically reacting		subject reports -----	11891, 17078
species in classical capillary -----	3025	population, 1960—	
tumor membrane, antibodies to spe-		characteristics of population -----	6035,
cific antigen, USSR study -----	10801	final reports -----	192-193,
ultraviolet luminescence, USSR		1826, 8140, 10074, 11913-915,	
study -----	11225	13773-774, 15326, 17114, 19308.	
see also Blood—Cytology.		announcements -----	15300
Cells (electrolytic), see Electrolytic		supplementary reports -----	6033-34, 8106-7
cells.		population and housing, 1960,	
Cellular aluminum for use in energy		Puerto Rico -----	1808
dissipation system -----	18719	Providencia, case study in economic	
Cellular oxygen consumption at low		censuses -----	15325
oxygen tensions -----	5896	tract memo -----	8108
Cellulose:		transportation, 1963, advance and/	
decomposition by Aspergilli -----	7951	or preliminary reports—	
electron microscopy, USSR study -----	2524	passenger transportation sur-	
mesophilic activated sludge, effects		vey -----	17079-81, 21027
on miscellaneous wastes -----	15240	truck inventory and use sur-	
CEMA, see Council for Economic Mu-		vey -----	17082-83
tual Assistance.		announcement and order form....	19284
Cement:		see also subjects.	
minerals yearbook chapter -----	20469	Census Bureau:	
plants, labor hygiene, USSR stud-		bulletin -----	15303
ies -----	20220	duties of enumerators, amend U.S.	
portland—		Code—	
plastic fibrous reinforcement -----	14201	law -----	17389
production, shipments, and		report -----	17792
stocks, monthly report -----	3308	enumerators, reimbursement for	
white, from Japan, determination		telephone tolls and charges, au-	
of no injury to U.S. industry -----	15134	thorize—	
Cement masons, employment out-		hearing -----	10335
look -----	9422	law -----	17394
Cemeteries, American military, agree-		reports -----	10261, 17791
ment with Belgium -----	3150	facts about America selected from	
Cenozoic era:		recent surveys -----	11908
geology, Lake Lahontan basin, one		machine-readable data, etc., availa-	
of late Pleistocene lakes of		ble, inventory -----	13769, 17112
Western U.S. -----	10639	manufacturers' orders and inven-	
sedimentary rocks in Salinas Val-		tories series, descriptions and	
ley, stratigraphy and struc-		procedures -----	17109
ture, study -----	12506	population and housing, 1960 cen-	
Censorship, Armed Forces, Army field		suses, procedural report -----	1827
manual -----	8025	press releases -----	3873
Census:		publications, catalog -----	3286
agriculture, 1964, facts about -----	17110	monthly supplement -----	3287
business, 1958, retail trade area		publications on Governments, recur-	
reports -----	21026	rent reports scheduled, 1965—	15304
decennial, climate, United States, -----	15154-	records, preliminary inventories -----	20634
155, 19016-25, 20877-878,		schedules -----	157,
21919-920.		4007, 4353-55, 6049-50, 10046,	
dental programs in local health de-		13748.	
partments, 1962 -----	16830	special censuses, lists -----	179
economic censuses, 1963, hear-		special censuses, summaries -----	176,
ings -----	8391	8129-30, 10066	
economic, take one year earlier		special services performed, machine-	
starting in 1968, amend U.S.		readable data available, inven-	
Code—		tory -----	13769

# INDEX 1964

Entry	Entry
Census Bureau—Continued	Central Valley project:
technical paper..... 1825	Auburn-Folsom south unit, con-
working papers..... 1827, 6052	struct, etc.—
Center-of-pressure, cones, sharp, right	hearings..... 4585, 14008
circular models, at hypersonic	reports..... 15745, 17600
speeds, study..... 11410	Auburn-Folsom South unit, Interior
CENTO, <i>see</i> Central Treaty Organiza-	Department report..... 6195
tion.	San Luis unit, Westlands water dis-
Central Aerological Observatory, pro-	trict for construction of water
ceedings..... 16726	distribution etc., system, hear-
Central African Republic:	ing..... 19603
economy, basic data..... 6853	Centrifugal force, equilibrium free
foreign trade regulations..... 21073	surface of contained liquid..... 20598
Central America:	Centrifugal pumps, <i>see</i> Pumps.
cotton production..... 2348	Centrifuges, atomic engineering mate-
recent Foraminifera off Central	rials list..... 21017
America (series)..... 14342	Cephalopods:
Central Arizona project:	California carboniferous..... 15951
authorize, construct, and main-	multinodose scaphitid, from Pierre
tain—	Shale and equivalent rocks..... 18138
hearings..... 14142	<i>see also</i> Ammonites.
report..... 17708	Ceponis, M. J., effects of heat-tunnel
Central Committee of Trade Union of	temperatures on quality of
Communications, Motor Trans- port and Highway Workers, USSR, meeting and resolutions of 2d plenum..... 18287	shrink-film-wrapped lettuce..... 36
Central force laws for elliptic orbit..... 13636	Ceramals:
Central Intelligence Agency:	cermet materials for X-20A nose
employees, improved retirement and	gear skid, friction and wear
disability system—	properties..... 5877
hearings..... 6346	titanium carbide cermet, surface
law..... 21135	failure in rolling contact at
report..... 19566	temperatures to 2000°F..... 18783
Central nervous system, <i>see</i> Nervous	Ceramic flux in welding some alloys, USSR..... 20167
system.	Ceramics:
Central Radio Propagation Labora-	aviation parts..... 8980
tory, ionospheric predictions..... 3310	coated base gate valves, operates at
Central States:	high temperatures..... 16670
cost of transporting freight..... 8837	fuels, irradiation testing, summary
East North, annual survey of manu-	report..... 8051
factures, 1962 statistics for	lead oxide, makes excellent high-
States, standard metropolitan	temperature lubricant..... 20555
areas, and large industrial	materials, microstructure, proceed-
counties..... 6027	ings of symposium..... 11431
East South, annual survey of manu-	reactor-fuel materials, effect of nu-
factures, 1962 statistics for	clear radiation..... 5982
States, standard metropolitan	refractory ceramic, wide usage, low
areas, and large industrial	fabrication cost..... 11375
counties..... 6030	summaries of AEC basic research
forest planting practice..... 1694	programs..... 5984
North—	thermal shock studies..... 13338
ground-water levels, 1957-61..... 21363	<i>see also</i> Pyroceram.
maximum water equivalent of	CERC, <i>see</i> Coastal Engineering Re-
March snow cover, frequency..... 21922	search Center.
sugar beet culture..... 5825	Cereals, <i>see</i> Grain.
urban places, consumer expendi-	Cereals as food, recipes, Army techni-
tures and income, 1960-61..... 13044	cal manual..... 13682
principal electric facilities, maps..... 675, 678	Cerebral arteriovenous differences in
radiation measurements, environ-	metabolic substrates during
mental, 1962-63..... 21012	hyperthermia..... 17015
sandy soils, management..... 27	Cerebral cortex:
small cities in north central region,	comparative chemoarchitectonics of
consumer expenditures and in-	functional groups of proteins
come..... 11272	in cortical nuclei of cutaneous
West North, annual survey of manu-	and motor analyzers in cats,
factures, 1962 statistics for	USSR study..... 12923
States, standard metropolitan	regulation of water and electrolyte
areas, and large industrial	balance, USSR study..... 2891
counties..... 6028	Cerebral hemorrhage, edema, intra-
West South, annual survey of manu-	venous hypertonic urea, evalua-
factures, 1962 statistics for	tion..... 15237
States, standard metropolitan	Cerebral hypoxia in response to grav-
areas, and large industrial	ity effects while breathing
counties..... 6031	oxygen, USSR..... 1238
Central States Forest Experiment Sta-	Cerebral vascular disease, <i>see</i> Blood
tion, report, 1963..... 14301	vessels.
Central Treaty Organization, econo-	Cerebrovascular system, progress in
mic development projects for	cerebrovascular disorders, sum-
assistance to CENTO for AID,	mary..... 9646
State Department, GAO report	Cerebrum, <i>see</i> Brain.
on examination..... 8712	Ceremonies (military), <i>see</i> Military
Central Utah project, Steinsaker Dam,	ceremonies, honor and salutes.
design and construction..... 3120	Ceria, <i>see</i> Cerium oxides.

	Entry		Entry
Cerium:		Chaco Canyon National Monument,	
metal, continuous electrowinning		general information.....	13297
from cerium oxides.....	7441	Chad:	
metal, electrical resistivity from 4°	14761	economy, basic data.....	14377
to 300°K.....		foreign trade regulations.....	21073
solvent extraction, metathesis of	7457	Chain drive, <i>see</i> Chain gear.	
bastnaesite.....		Chain gear, chain friction system	
Cerium isotopes, Ce-144, determina-	13696	gives positive, reversible drive.....	11367
tion in vegetation and soil.....		Chains:	
Cerium oxides:		Federal item identification guides	
continuous electrowinning of ce-		for supply cataloging.....	12291
rium metal from cerium ox-	7441	supplements.....	3472
ides.....		Chairs, <i>see</i> Wheelchairs.	
physical properties of ceria pow-	7452	Challenges and opportunities in ex-	
ders derived from 5 salts.....		pansion of U.S. exports (ad-	
Cermets, <i>see</i> Ceramels.		dress).....	19353
Cerrito, Ambrose A., relief.....	17462	Chamber geometry in multi-stage flash	
Cerro Gordo, Calif., mining district,		evaporators.....	19816
Inyo County, geology.....	4788	Chambers of commerce, <i>see</i> names of	
Certificated air carriers, <i>see</i> Air car-		places where located.	
riers.		Chamiza, <i>see</i> Saltbush.	
Certificates, employment and age,		Chamizal tract:	
State agencies and local offi-		solution of problem—	
cials responsible for issuance,	9376	convention with Mexico.....	2137, 7799
directory.....		convention with Mexico, imple-	
<i>see also</i> types of certificates, or sub-		ment—	
jects involved.		hearings.....	4580-81, 8378
Certification of air carriers, <i>see</i> Air		law.....	10143
carriers.		reports.....	4521, 4566, 6332, 8342
Cervical lobes, <i>see</i> Brain.		settlement with Mexico, appro-	
Cesium:		priations, 1964, supplemen-	
cesium ions in cesium vapor, differ-		tal.....	10358
ential scattering cross section		Champion, K. S. W., paper, May	
with charge exchange, calcula-	18791	1964.....	16998
tion.....		Chancelleries:	
coatings on tungsten, thermal de-		foreign, in D.C., location in residen-	
sorption and surface diffusion,	5500	tial areas prohibit—	
field-emission investigation.....		law.....	21151
concentration, effect on accumula-	4970	reports.....	15573, 21196
tion in plants.....		Chanceries, <i>see</i> Chancelleries.	
deterioration of some aluminum al-	7470	Chanceroïd, management in general	
loys in its presence.....		practice.....	16840
extracting from pollucite ores, dis-		Chandler, Craig C., mass fires and	
solution and roasting tech-	9505	conflagrations.....	2379
niques.....		Chandler, Henry P., industrial dia-	
ions, research on volume recombi-	5725	monds, materials survey.....	11314
nation, final report.....		Chandler, Maria N., relief.....	2022, 6138
seed ions and electrons, three-body		Chandler River, geology of region.....	804
collisional recombination in		Chaney, Lucien W., infrared interfer-	
high-density plasmas with argon	21752	ence spectrometer, its evalua-	
carrier gas.....		tion, test and calibration.....	14774
thermionic diode, application of		Chang In Wu, <i>see</i> Wu, Chang In.	
study of zero-field electron	14886	Chang Sheng, <i>see</i> Sing Jeung.	
work function of metal im-		Chang, Shu Hsien, relief.....	17673
mersed in gas.....		Channel patterns and terraces of Loup	
thermionic vapor converters for nu-	14786	Rivers in Nebraska.....	12510
clear applications, research		Chanslor-Western Oil & Development	
program.....		Co., GSA to sell part of Chell	
vapor effects on Bayard-Alpert ion-	9609	Air Force Station, Bell, Calif.,	
ization gages.....		by negotiation to, report.....	4543
vapor, pyrometer correction due to	5876	Chapin, Arthur A.:	
dimer absorption.....		addresses, etc.—	
Cesium iodide, crystals fused to vac-	13190	Aug. 5, 1964.....	16575
uum tube faceplates.....		Oct. 15, 1964.....	21653
Cesium isotopes:		Chaplains:	
Cs-137 and potassium in Finnish	13392	Army, mission, status and func-	
Lapps and their diet.....		tions, field manual.....	17036
Cs-137, self-purification from res-	18359	challenge of chaplaincy in Army.....	19204
ervoir water, USSR study.....		Senate, prayers, 87th-88th Con-	
Cetacea, dolphins, application of		gresses, print as Senate docu-	
study of living systems to tech-	1121	ment, report.....	19575
nological problems, USSR		Chapman, Andrew J., effect of weight,	
study.....		density, and heat load on ther-	
Ceylon:		mal-shielding performance of	
educational foundation and financ-		phenolic nylon.....	13225
ing of exchange programs,	20840	Chapman, Gary T., laminar convec-	
agreement.....		tive heat transfer, etc., on	
foreign trade regulations.....	21090	cones at speeds to 24 km/sec.....	18786
needs peace.....	6965	Chapman, Robert M., geology of	
plant quarantine import require-	9923	Killik-Etiviluk Rivers region,	
ments.....		Alaska.....	10636
CFA, <i>see</i> Community Facilities Ad-		Chapman, Nebr., proposed waterfowl	
ministration.		refuge area, ground water con-	
CGS series.....	3876	ditions.....	15966
CH-47, <i>see</i> Helicopters.			



# INDEX 1964

Entry	Entry
Chapogas, Peter G., prepackaging lettuce at shipping point-----	13591
Characidae, South American, subfamilies Lebiasininae, Erythrininae, subtribe, Nannostomina, osteology, etc-----	20659
Charcoal, production in United States, 1961-----	2350
Charcoal briquettes, <i>see</i> Briquets.	
Charczenko, Nickolai, jet effects on base and afterbody pressures of missile-----	1467
Charge transfer studies with time-of-flight mass spectrometer, cross section for N <sub>2</sub> on N <sub>2</sub> at 2650 electron volts-----	54
Charges required by prescribed Government policies not assessed against recipients of Government services, GAO report-----	8708
Charitable contributions, <i>see</i> Charities.	
Charitable institutions: tax exempt foundations, their impact on our economy-----	8402
print additional copies, reports-----	368-369, 2201-2
print hearings, report-----	19482
Charitable trusts: tax exempt, their impact on our economy-----	8402
print additional copies, reports-----	368-369, 2201-2
print hearings, report-----	19482
Charities: District of Columbia charitable solicitation act, amend-----	12124
hearings-----	6325, 8285
fund raising within Federal service for voluntary health and welfare agencies, manual-----	17136
Charles, Robert H., nomination, hearings-----	523
Charleston, S.C., principal electric facilities, map-----	679
Charleston, W. Va.: area redevelopment manpower report-----	17932
occupational wage survey-----	14699
Charlotte, Mich.: motor carrier accident-----	6870
railroad accident-----	6870
Charlotte, N.C., occupational wage survey-----	14697
Charlton, John W., relating climate to eastern white pine blister rust infection hazard-----	6742
Charring ablators, <i>see</i> Ablators.	
Chart book of basic health economics data-----	7693
Charters: Federal, consideration, authorization, report-----	6452
Federal mutual savings banks, legislation, hearings-----	2108
United Nations, enforcement of art. 19 as to payment by members of assessments in arrears, expressing sense of Congress, reports-----	17535, 17799-800
Chartiers Creek: basin, flood control, engineer report-----	12335
departmental edition-----	12029
document edition-----	
Charts: mathematical functions with formulas, graphs, etc., NBS handbook-----	18267
sold by Superintendent of Documents, price list-----	20738
<i>see also</i> Maps and charts—Organization charts— <i>also</i> special subjects.	
Chase, John L., doctor's degrees awarded, 1961-62-----	19636
Chase, William W., planning urban school facilities-----	8491
Chatelain, William L., relief-----	21179
Chattanooga, Tenn.: occupational wage survey-----	1382
principal electric facilities, map-----	679
Chauncey, Howard H., enzyme activity analysis as method for evaluation of action of oral preparations-----	72
Check lists, <i>see</i> Checklists.	
Checklists: business service-----	3295
directories in science and technology-----	5455
Education Office publications-----	574
periodicals currently received in Army Library-----	19043
State laws and regulations affecting mentally retarded-----	15067
State publications, monthly-----	3732
<i>see also</i> names of departments, etc., issuing checklists— <i>also</i> subjects.	
Checks: clearing and collection, regulation, amendment-----	17988
drawn in favor of banks, etc., for credit of Federal employees' accounts, authorize, hearing-----	19508
forged, Government, issued at Parks Air Force Base, Calif., relief of persons involved in negotiation-----	1951
law report-----	2207
social security-----	11610
Cheektowaga, N.Y., population, special census-----	15320
Cheese: and cheese products, definitions and standards-----	4749
laws and regulations affecting industry, summary-----	4195
Chelan division, <i>see</i> Chief Joseph Dam project.	
Chell Air Force Station, Bell, Calif., GSA to negotiate sale to Chanslor-Western Oil & Development Co., report-----	4543
Chemical analysis: analytical services of NBS Analysis and Purification Section-----	11429
brines from oilfields in east Texas-----	11328
cleaning and sanitizing materials, CEC fact sheet-----	11742
high Z atoms in low Z media, use of radioisotopes as source of X-rays to develop Rayleigh scattering method-----	19254
mineralogical composition of Pierre shale, quantitative interpretation-----	18127
quality of surface water, West Branch Susquehanna River Basin, Pa-----	4824
surface waters, U.S. and Puerto Rico, 1961 inventory-----	6827
Susquehanna River at Harrisburg, Pa., chemical quality variations-----	828
<i>see also</i> names of substances analyzed.	
Chemical bond, <i>see</i> Valence.	
Chemical elements: build-up factor of radioisotopes in aquatic insects, USSR study-----	1288
intracellular and extracellular concentration by aquatic organisms-----	6818
transition, alloying characteristics with rare earth elements-----	19233
<i>see also</i> Fission products.	

	Entry
Chemical industries, <i>see</i> Chemicals.	
Chemical kinetics, <i>see</i> Chemical reactions.	
Chemical reactions:	
inorganic, high gamma radiation flux	7458
kinetics, homogeneous reactions, tables	14936
microcircuit elements, formation rates, resonance theory, USSR study	7996
time-of-flight mass spectrometer adapted for kinetic study	1151
Chemical warfare:	66
agents, effect on organism, etc., booklet, USSR translation	12767
defense against chemical agents, Navy handbook	1395
East Germany, soldiers of chemical service, handbook, excerpts	20294
protecting food and water against chemical-biological-radiological attack, USSR	14555
protection of grain products from radioactive, chemical, and bacterial substances discussed, USSR	14591
psychochemical warfare, new concept	12958
USSR, individual means of protection against chemicals and radiation	20103
Chemicals:	
agricultural—	
registered pesticides, summary of uses, supplements	19, 9927
USSR drive for greater output	2883
USSR status and prospects	19895
chemical evaluation and control fact sheet MID-CEC (series)	11742
chemical fundamentals of magnetic water treatment, USSR study	16472
chemical science in higher educational institutions, USSR	16210
chemicals and chemical products, Federal item identification guides for supply cataloging	12294
supplement	3475
coal, minerals yearbook chapter	21686
composition, snow in northern Sierra Nevada and other areas	15954
compounds, protective effect against radiation, USSR study	20371
control of brush and trees	20918
control of weeds in crimson clover grown for seed production	7950
economics of USSR industry	10900
effects on earthworms	8624
effects on living matter, USSR study	9324
environmental and chemical hazards series	5419, 18614
fire retardant, use in fireproofing roadside vegetation	2378
fish control, screening	19721
heat treatment of steel, theoretical bases, USSR study	16109
industry—	
Council for Mutual Economic Assistance employment outlook	5195
health problems resulting from expansion, USSR study	7393
Kazakhstan higher schools program for workers	20123
Lithuanian SSR, mechanizing and automating	16498
reports	5094
toxic chemicals and labor hygiene, USSR studies	3317
USSR expanding industry and public health	5359
USSR technological progress and industrial hygiene	5335
Uzbekistan, development	5045
	21462

	Entry
Chemicals—Continued	
influence on conditioned reflex activity, USSR study	7062
inorganic, current industrial reports	163, 3390, 10053
laboratory evaluation of compounds as repellents to flour beetles, supplement	5832
list, compounds authorized for use under poultry and poultry inspection programs	7878, 19045
plants, investment and operating costs, Jan.-Dec. 1963, bibliography	13109
protection against, in industry, USSR studies	2522
protective overgarments, behavior of liquids on various cords for seams	11590
purification services of NBS Analysis and Purification Section	11429
radio-protective substances, Japanese study	16311
safe use by field crop producer	19085
reprocessing plant for nuclear fuels, hearing	6188
safety in industry series	5419, 18614
smoke trails for wind-shear measurements, rocket-vehicle production, evaluation as agents	20586
statistics directory	15296
structure and anthelmintic activity, USSR study	18495
thrust systems for space station drag cancellation	20578
toxicity to carp in forced feeding, transport problems, USSR studies	6729
use, ecological implications to man (paper)	5069
use in cotton production, extent and cost	7692
use in western irrigation and drainage canals to control water-weeds, report	12313
USSR industrial development, translations	1677
1040, 1076, 1143, 1188, 1325, 2572, 2667, 2738, 2823, 2826, 2883, 4985, 4993, 5024, 5058, 5078, 5094, 5119, 5203, 5214, 5220, 6895, 6900, 6927, 7076, 7088, 7116, 8884, 8912, 8926, 8942, 9053, 9075, 9189, 9261, 9303, 10768, 10952, 11027, 11111, 12729, 14599, 14631, 16019, 16104, 16115, 16169, 16252, 16337, 16400, 16427, 16468, 16546, 18276, 18355, 18379, 18452, 19887, 20041, 20129, 20144, 20162, 20194, 20200, 21462, 21628.	
chemical machine building	1068,
1204, 2046, 2865, 2911, 4947, 5125, 5329, 7155, 9013, 10752, 11242, 16111, 18210, 19889, 21435.	
water quality, Brookhaven National Laboratory vicinity, Suffolk County, N.Y.	19772
<i>see also</i> Organic compounds.	
Chemicopharmaceuticals, <i>see</i> Drugs.	
Chemiluminescence, <i>see</i> Luminescence.	
Chemiluminescence of lipids and rate of growth in Pacific salmon, USSR	4977
Chemism of photosynthetic phosphorylation, USSR	18482
Chemistry:	
abstracts pertaining to Communist China in Soviet journals	1080,
2579, 2672, 2820, 2830, 2866	
agriculture, USSR studies	5145, 18334

# INDEX 1964

Entry	Entry
Chemistry—Continued	Chemoreception of insects and ticks, USSR study-----
analytical, ORNL master manual of methods-----	9199
index-----	13712
supplements-----	5985, 13713
cells, problems, USSR study-----	1234
chemical technology, curriculum-----	21263
complex compounds, 9th-all-Union conference, USSR, report-----	20243
cybernetics in chemistry, USSR study-----	4959
development, related biological and medical problems, USSR-----	20374
earth's crust, USSR study-----	2593
East European journals, abstracts-----	1034, 1063, 1125, 1129, 2523, 2632, 2804
East European scientific abstracts-----	4964, 4975, 5110, 5149, 5162, 5254, 5275, 5326, 6882, 6948, 7111, 7121, 7198, 7262, 7337, 8892, 9015, 9078, 9168, 9327, 9351, 9370, 10814, 10864, 11062, 11090, 12589, 12645, 12837, 12857, 12892, 12957, 13009, 14431, 14600, 16004, 16045, 16082, 16120, 16219, 16275, 16446, 16526, 18213, 18273, 18380, 18423, 18492, 20008, 20065, 20127, 20392
Fitchville quadrangle, Conn., petrochemistry-----	18109
Hungarian Academy of Sciences, research, translations-----	18456
journal of research, National Bureau of Standards-----	3628, 13269
manganese in natural water (series)-----	6817-18
nuclear reactor, proceedings of 6th conference-----	128
physico-chemical research, USSR studies-----	7030
Poland, development prospects from Druzhba oil pipeline-----	5157
polymer, in Communist China-----	10909
programmed teaching, USSR-----	5044
research and development, opportunities, examination announcement-----	11049
role in development of medicine, USSR study-----	1220
Soviet and Chinese articles, English abstracts-----	3440
surface waters quality, Brazos River basin, Texas-----	18149
synthetic poisons, effects and military significance, East German study-----	8955
uranium and transuranium elements-----	19229
USSR, large-scale development-----	14533
USSR, research, popular accounts-----	12996
USSR, scientific abstracts-----	1197, 2697, 5042, 6972, 8973, 12690, 13015, 14577, 16391, 18376, 20166, 21430
wood, list of publications-----	18046
see also Agricultural chemistry—Biochemistry—Cytotoxicology—Geochemistry—Organic chemistry.	
Chemistry Division of Hungarian Academy of Sciences, reports-----	21458
Chemists:	
employment outlook-----	9406
public health scientist, examination announcement-----	209
research opportunities, examination announcement-----	8156
USSR, I. L. Knuzyants, biographic information-----	19876
USSR, Pavel Trofimovich Danilchenko, obituary-----	9200
Chen, Francis F., excitation of electrostatic oscillations in magnetic field-----	13698
Chenoweth, Paul L., flight evaluation of wide-angle, overlapping monoculars for providing pilot's field of vision-----	9610
Chenzoff, Andrew P., review of literature on task analysis methods-----	18855
Chepil, W. S., management of sandy soils in central United States-----	27
Cheplo, Nandor J.: basic data on economy of British Pacific Islands-----	6846
basic data on economy of Laos-----	21079
foreign trade regulations of Vietnam-----	12556
Chernoff, L., photometry of projectors at National Bureau of Standards-----	3049
Chernosky, E. J., equatorial loci of earth's magnetic field and cosmic ray parameters-----	11799
Chernovtsy, Ukrainian SSR, cardiovascular morbidity among adult population-----	2643
Cherokee Indians: law, conveyance-----	17320
report-----	15718
Cherokee National Forest: transfer lands for Foothills Parkway-----	17274
law reports-----	503, 15518
Cherries: canned red tart pitted, standards for grades-----	9914
frozen red tart pitted, standards for grades-----	9915
production, France-----	12429
production, use, value, by States, 1962-63-----	15129
sour, crop production report-----	15131
sweet, storage in controlled atmospheres-----	9908
tart cherry industry, Great Lakes States, production costs-----	14170
tart, electric sorting machines for, performance studies, 1963-----	19053
Cherry, William R., solar cell radiation damage-----	7513
Cherry blossoms, see Japanese flowering cherry.	
Chesapeake & Ohio Ry., accidents-----	877, 4878, 4880
Chesapeake Bay: additional bridge across-----	17663
hearings-----	13954
report-----	19720
fisheries, annual summaries-----	695
hurricane survey, engineer report-----	2294
departmental edition-----	1991
document edition-----	10558
oyster industry-----	10557
sharks, anglers' guide-----	10557
shoreline, hurricane survey, engineer report-----	15957
departmental edition-----	17469
document edition-----	
south shore, Hampton Roads to Little Creek, Va., hurricane survey, engineer report-----	6595
departmental edition-----	6203
document edition-----	

# JANUARY-DECEMBER

	Entry
Chesapeake Bay—Continued	
storm warning facilities chart, 1964	13522
Chest:	
roentgenographic examination of unanesthetized primates, restraint apparatus	1749
thoracic cake impedance measurements—	
cancellation of respiration effects on transthoracic impedance	5906
cardiac output	9988, 15238
dynamic characteristics of impedance pneumograph	5907
tissue resistivity	9987
Chester, John W., noise from pneumatic rock drills	13126
Cheyenne Indians:	
Northern Cheyenne Tribe of Tongue River Reservation, judgment funds disposition—	
law	17417
reports	15775, 17579
Cheyenne River Sioux Tribe, <i>see</i> Sioux Indians.	
Chi-King Leung Chou, <i>see</i> Leung Chi King.	
Chi-Ping, Tung, <i>see</i> Tung Chi-Ping.	
Chiantella, A. J., filterability of distillate fuels	5610
Chicago, Ill.:	
Board of Trade, futures trading and open contracts in wheat, corn, etc.	3550
Federal paperwork jungle, hearing	14014
Federal reserve member banks, condition, weekly statement	3349
Hyde Park-Kenwood urban renewal area rehabilitation, ineffective administration, HHFA, GAO report	19757
Mercantile Exchange, futures trading and open contracts in eggs, potatoes, and butter	3547
occupational wage survey	16599
principal electric facilities, map	674
Science Information Data Processing Center, establish, hearings	398
Chicago and Northwestern Ry. accidents	679, 6869, 12572
Chicago, Burlington & Quincy R.R., accident	6868
Chicago, Rock Island & Pacific R.R., emergency board report	2290
Chicagof Island, aerial photographs, recognition criteria of rock types	6795
Chick, Bruce, ultrasonic methods in study of fatigue, etc., in crystals	4223
Chicken mites, poultry mites, how to control	19084
Chickens:	
broilers—	
chicks placed in 22 States, 1963—	13483
commercial production, etc., 1962-63, by States	11645
commercial production, 22 States, 1963	13484
brooding chicks with infrared lamps	9945
egg production tests, United States and Canada, 1963 report	1686
farm production, disposition, cash receipts and gross income, 1962-63, by States	11645
frozen cut-up, specified shrink films for prepackaging, evaluation	11772
immunized with antigen from <i>Ascaridia galli</i> , effect of vitamin A on antibody formation, USSR study	8924
intestinal coccidiosis, control, etc—	11765

	Entry
Chickens—Continued	
national poultry improvement plan, breed distribution of participating flocks	16
on farms, Jan. 1963-64, by States	11645
pullet chicks for broiler hatchery supply flocks	3951
tested by official State agencies, monthly report	4099
Chidester, Alfred H., tale resources of U.S.	10632
Chief Joseph Dam project:	
Chelan division—	
construct, etc., Manson unit—	
hearing	8450
report	14052
Interior Dept. report	13921
Okanogan-Similkameen division—	
construct, etc., Whitestone Coulee unit—	
hearing	10425
law	19407
reports	6487, 17527
irrigation water supply, Whitestone Coulee unit, Interior Dept. report	8243
Chief Medical Director, <i>see</i> Medicine and Surgery Department, Veterans Administration.	
Child care, <i>see</i> Children.	
Child development, <i>see</i> Children.	
Child health, <i>see</i> Children.	
Child Health and Human Development, National Institute, <i>see</i> National Institute of Child Health and Human Development.	
Child labor:	
bulletin	9874
employment of minors between ages 14 and 16, regulations	21918
fair labor standards act provisions, guide	9874
laws, questions and answers	11255
laws, State, summary	11254
regulations	21918
Child life, <i>see</i> Children.	
Child placing:	
dependent children, State agency responsibility, report	6215
foster care in private institutions, Federal payments, extend period—	
law	21133
reports	8328, 17834
foster parents, use of group methods	8146
responsibility under social security act, extend present provision—	
law	13894
reports	8327, 12237
Child Research Center, National Institutes of Health, building, construction, hearings	17629
Child welfare, <i>see</i> Children.	
Child welfare institutions:	
cost analysis project	6056, 13781
what houseparents should know about problems of children in their care	11921
Child Welfare League of America:	
establishment of joint project on cost analysis in children's institutions	6056
project on cost analysis in children's institutions	13781
Children:	
abused—	
identification of abusive parents helps prevention	11920
protective casework	4363
battered child, bibliography	196
child care, birth to middle teens, Government publications, list	16829
child welfare programs (address)	11712
child welfare, statistics	200, 13784



# INDEX 1964

	Entry
Children—Continued	
child with a speech problem	21039
childhood mortality trends, 1961	21045
children of veterans with wartime total disability, educational assistance—	
hearing	542
law	13909
report	513
Children's Bureau history, 5 decades of action, insert	21042
city child, preparing him for his school, school-home cooperation in low-income neighborhoods	15854
consumer information, price list	21842
crippled, services for	11917
Cuban refugees, care away from home, observation of reporter—	
dependent—	
aid to families—	
AFDC in review 1936-62	7845
coordination in location of absent parents, report on meeting	4672
State public assistance plans under social security act, staff development provisions	12355
Implications of AFDC eligibility review (address)	13534
of unemployed parents, aid to families	4105
public assistance—	
families, money payments to recipients, Oct. 1963	14215
families, program facts	12356
for education, AFDC survey	11714
monthly cost standards for basic needs used by States, Jan. 1963	10496
education, deny federal assistance to institutions which practice racial discrimination, hearing	2110
education in disaster areas, financial assistance, provide, hearings	17884
education in federally affected areas—	
annual report, 1963	6560
broaden assistance, hearings—	
extend and amend law—	
hearings	396, 17884
law	21157
reports	15732, 19483
effects of maternal employment, personal and family factors	8144
exceptional—	
education	4646
professional preparation for educators, financial aid and sources of information	6580
publications list	590
research programs, studies in progress	17120
special education, statistics 1957-58	2268
facts about children	10078
14 years of age or over, State laws right of minor to nominate own guardian	21928
gifted, Talent Development Project, 1964	6582
grouping for instruction in elementary schools, conference points way	6569
handicapped—	
education, grants-in-aid program for research and demonstration projects	6568
education, preparation of professional personnel, program	19637
grant program for preparation of professional personnel in education	6567
organization and implementation of programs for 1964	17920

	Entry
Children—Continued	
health of school age children	19313
health services, grants to combat mental retardation, commitments	2128
how children learn to read	21266
how they develop intellectually, implications of changing ideas	13777
interdisciplinary journal for professions serving children	3318
mental development, problems, USSR study	10929
mental health in child health conference, attitude study project, evaluation	17117
mentally retarded—	
automated teaching, summary comparison of 2 procedures	12321
closed short-term group as treatment adjunct for parents	13776
feeding, guide for nurses	10079
guide for public health nurses	11918
institute on nutrition programs	1829
parents and physician's role	6055
prevention through improved service, social security act amendments	8143
minor, State laws governing natural guardianship and support	19037
needs, U.S. experience in planning and providing for	7856
new programs for children, 1964	21042
pediatric surgery, course of development, USSR study	18319
phenylketonuric, group guidance for parents	13780
picnic table for	8636
preschool child's eyes, care, safety precautions, etc	21041
progress in collaborative perinatal research, nationwide mother-child study, summary	16752
public welfare services, staff training project	7852
rates of birth, census of population, 1960	11014
research and informed judgment on grouping children, guide	14186
research program, studies in progress	17120
school, dental care in community with fluoridation	11576
school dental care services, Woonsocket, R.I., study	13421
school library services for culturally deprived	601
schoolchildren's physical and emotional responses, USSR studies	10994
services under title 5 of social security act, fact sheet	6057
6-11 years, health examination survey	13400
smoking, health, and you, facts for teenagers	19312
social security childhood disability benefits	1588, 16861
State laws governing emancipation of minors—	
by marriage	13551
permitted by court order	9895
teaching young children to read	10474
teenage children and smoking	17119
training, USSR study	18388
underprivileged, reading unreadiness	6577
when teenagers take care of children, guide for baby sitters	17118
with excess weight, tendency to become overweight adults	13417
young, feeding, health education of tropical mother	10080
your child and health examination survey	9736

# JANUARY-DECEMBER

	Entry
<b>Children—Continued</b>	
see also Adoption—Child labor—	
Child placing—Cripples—Day	
care of children—Delinquent	
children—Juvenile delin-	
quency.	
<b>Children and Youth, Interdepartmen-</b>	
<b>tal Committee on, see Inter-</b>	
<b>departmental Committee on Chil-</b>	
<b>dren and Youth.</b>	
<b>Children's Bureau:</b>	
conference with Public Health Ser-	
vice, etc., 1963, preliminary re-	
port of actions.	5662
current program.	10083
establishment of joint project on	
cost analysis in children's in-	
stitutions.	6056
folder series.	11917, 21039-41
history, 3 decades of action, in-	
sert.	21042
project on cost analysis in chil-	
dren's institutions.	13781
publications.	10083-84,
15332, 17117-119, 19311-313,	
21042-43.	
publications, lists.	10085, 21044
publications, 1912-May 1964, in-	
dex.	15329
publications, price list.	21840
statistical series.	199-200,
4362, 13784, 17121.	21045
<b>Children's Hospital, D.C., rates, ad-</b>	
<b>justment to costs, appropria-</b>	
<b>tion.</b>	17667
<b>Children's literature, classification,</b>	
<b>Library of Congress.</b>	18650
<b>Childs, T. W., dwarfmistletoe control</b>	
<b>opportunities in ponderosa</b>	
<b>pine reproduction.</b>	6739
<b>Chile:</b>	
agricultural commodities, agree-	
ment.	18979
central neotropical Microlepidop-	
tera, species of genus Proculia,	
synopsis.	21802
education.	6563
elections.	
Soviet appraisal.	20229
Soviet report.	20132
foreign trade regulations.	10692
mortality, recent trends.	9732
Chilton, C. J., atlas of solar flare ef-	
fects.	9637
Chimney Rock National Historic Site,	
general information.	11459
Chimneys, safety, literature survey.	3044
Chimpanzees:	
comparison of trace imitation with	
conditioned trace reflexes,	
USSR study.	16170
Project Mercury ballistic and or-	
bitral flights, results.	5501
Chin, J., graphite-matrix fuels devel-	
opment for AVR, final report.	13693
Chin-Bing, Nora, relief.	14039
<b>China:</b>	
cities of mainland China.	10068
coast, sailing directions, change.	5577
Communist—	
abstracts from Soviet journals.	1043,
1048, 1064, 2525, 2618,	2651
biology, chemistry and mathe-	
matics.	1080
chemistry.	2579,
2672, 2820, 2830,	2866
geodesy and geology.	1248
mathematics.	2495
mechanics and machine build-	
ing.	2513
metallurgy.	2692
mining.	1081, 2692
physics.	2868

	Entry
<b>China—Continued</b>	
<b>Communist—Continued</b>	
administrative divisions, of Peo-	
ple's Republic, handbook, 1964.	20235
agricultural situation, 1964.	8475
agricultural situation and crop	
prospects.	21262
agriculture, animal husbandry,	
and materials.	911,
985, 1108, 1184, 1225,	1340,
2371, 2594, 2609, 2684,	2799,
2926, 4940, 4989, 5057,	5243,
5264, 5390, 6919, 6932,	7036,
7081, 7106, 8940, 9183,	10798,
10951, 11061, 12650,	12822,
13017, 14656.	
ambitions and realities.	15258
attitude toward Soviet literature,	
criticism.	6907
botanical gardens.	2637
<b>Chinese Communist Party lead-</b>	
<b>ership and succession to Mao</b>	
<b>Tse-tung, appraisal of ten-</b>	
<b>sions.</b>	9802
competes for foreign support with	
Russian Communists.	21241
digests.	962,
1049, 1114, 2584, 2612,	2689,
2770, 5271, 5304, 6889,	7310,
8896, 9340, 10800, 11084,	11230,
12735, 12956, 14449,	16116,
16213, 16529, 18251,	19637,
19914, 20080, 20392,	21461
East, types of karst.	9208
economic development problem.	7200
economic fauna, birds.	8904
economic materials, serial re-	
ports, JPRS publication no-	
tice.	12578
food and agriculture.	16295,
16423, 18208, 18309,	18474,
19941, 20155, 20177,	20396,
21467, 21526.	
geography, translations from	
Chung-kuo hsin-wen.	7334
geophysical prospecting.	9361
half-work, half-study schools, ex-	
periments with self-supporting	
educational institutions.	10464
how officers and men of China's	
army should study works of	
Mao Tse-tung.	12981
hunger and poverty, struggle	
against, observations.	2730
industry and materials.	16293,
16421, 16482, 18398,	18475,
18600, 19857, 19998,	20170,
20313, 21469.	
industry, mining, fuels and	
power.	910,
1102, 1213, 1339, 2603,	2611,
2723, 2787, 2929, 4933,	4958,
4988, 5077, 5235, 5265,	6918,
6933, 7031, 7104, 7154,	7281,
8936, 8970, 10796, 12642,	12830,
14412, 14537, 14643.	
<b>Journey without adventure and</b>	
<b>fantasy, USSR book.</b>	14451
labor conditions.	9475
Laos boundary, study.	15101
leaders, condemned in book, pub-	
lished by Pravda, USSR.	8852
machine translations, problems.	6981
management, trade and finance.	16061,
16131, 16214, 16287,	16476,
16555, 18396, 18426,	18448,
19856, 19995, 20338,	20401,
21475, 21520.	
minority nationalities.	20392
national defense and socialist	
construction, etc., studies.	5114
nationalities and class struggle,	
study.	16188
opposition to test ban treaty,	
USSR article.	974

# INDEX 1964

	Entry
China—Continued	
Communist—Continued	
Po-f-Po distorts facts, USSR article	14518
policy toward underdeveloped countries, list of publications	9783
political and sociological information	899
912, 981, 1046, 1100, 1113, 1189, 1223, 1281, 1297, 1307, 1320, 1342, 2579, 2614, 2709, 2739, 2759, 2793, 2885, 2931, 4897, 4930, 4997, 5066, 5117, 5191, 5242, 5280, 5303, 5330, 6907, 6934, 6990, 7007, 7068, 7096, 7129, 7299, 7311, 9056, 9147, 9284, 9311, 10797, 10827, 10946, 11046, 11181, 12666, 12751, 12849, 12873, 12886, 12976, 14413, 14529, 14557, 14655, 16001, 16065, 16125, 16138, 16166, 16193, 16224, 16258, 16292, 16305, 16325, 16469, 16475, 16495, 16508, 16517, 16554, 18203, 18225, 18300, 18365, 18394, 18446, 18529, 18593, 18603, 19848, 19886, 20046, 20137, 20160, 20187, 20314, 20399, 21527, 21549, 21609.	
politic-military relationships	9803
polymer chemistry	10909
popularization of higher education	2277
provocation on Soviet border, USSR study	955
provincial atlas	21558
Radio Peiping attacks on Soviet, USSR criticism	1196
railroad passenger timetable	1217
reservoirs, studies	5043
science and technology	915
1088, 1209, 1231, 2605, 2751, 2786, 2897, 4936, 4955, 5080, 5246, 5279, 6942, 7079, 8866, 8985, 9016, 9041, 9167, 10760, 10844, 10888, 10970, 10992, 11172, 11213, 12611, 12658, 12700, 12715, 12819, 12973, 13021, 14411, 14532, 14604, 14608, 14624, 14644, 16015, 16208, 16240, 16334, 16419, 16497, 18204, 18406, 18431, 18496, 18592, 19839, 19851, 20112, 20158, 20179, 20273, 20396, 21419, 21496, 21536, 21566.	
bibliography	1793
scientific abstracts	5030
5087, 5091, 5101, 5106, 5126, 5146, 5151, 5165, 5175, 5256, 5276, 5294, 5310, 5324, 5337, 5345, 6953, 7045, 7065, 7092, 7095, 7119, 7140, 7164, 7192, 7208, 7239, 7255, 7289, 8894, 8933, 8992, 9014, 9027, 9046, 9074, 9096, 9129, 9169, 9223, 9249, 9314, 9338, 9362, 10730, 10753, 10903, 10969, 11150, 11158, 11175, 11194, 12891, 14447, 14560, 14653, 16232, 16251, 16280, 16447, 16542, 18212, 18263, 18525, 18539, 19882, 19915, 19921, 19937, 19976-977, 20336, 20342, 21482	
shipbuilding	10742
Sinkiang-Uigur Autonomous Oblast of People's Republic, Kirgiz population, ethnographical information	11192
Sino-Soviet bloc, United States trade, 1961-63	18181
southern, ethnic minorities, list of references	9779

	Entry
China—Continued	
Communist—Continued	
Soviet-Chinese dispute—	
class struggle on world scale	2731
Peking's provocative polemic against Moscow	9113
Peking's version	1332
spare-time education for workers—	
trade, finance, transportation, and communications	914
939, 986, 1110, 1185, 1222, 2575, 2613, 2722, 2794, 2838, 2927, 4934, 4957, 4991, 5061, 5241, 5262, 5352, 5391, 6946, 6988, 7029, 7050, 7105, 7312, 8944, 9142, 9319, 10906, 12602, 12659, 12744, 12826, 13019, 14531, 14548, 14641.	
transportation and communica-tions	16316, 18397
war and peace, 2 different lines on question, comment on open let-ter of CPSU	4971
Yugoslav sailor's 6 years in Chi-nese prison	20272
Republic—	
agricultural commodities, agree-ments	15124, 16874
agricultural publications since 1947 in National Agricultural Library	9628
atomic energy cooperation for civil uses, agreement	18986
combined military exercises, 1964, agreement	16875
education, exchange program, fi-nancing, agreement	13478
investment guaranties, agree-ment	7794
mutual defense assistance, dispo-sition of equipment and mate-rials, agreement	18970
trade in cotton textiles, agree-ments	7776, 11638
Russo-Chinese treaties and agree-ments relating to Sinkiang, 1851-1949	12863
China Lake, Calif.:	
Naval Ordnance Test Station, land conveyance to Kern County, Calif.—	
law	17359
reports	364, 15727
China news (periodical):	9109
Chinch bugs, control on corn, sor-gum, small grains	19083
Chinese language, automatic recogni-tion of characters, linguistic problems	16147
Ching-chi yen-chiu (periodical):	
translations	1294, 2925, 5260, 7052, 11221, 12610, 12887, 16064, 16132, 18568, 19907, 20329.
errata	884
Ching Heig Yen, and wife, relief	1873, 2145
Chingas, Andreas, and others, relief	19547
Chinn, Herman I., research and devel-opment activities of Economics Ministry, Germany	5572
Chinook salmon, see Salmon.	
Chipman, Robert A., earliest electro-magnetic instruments	21799
Chippewa Indians:	
judgment funds, disposition—	
law	21155
reports	17838, 21155
Ojibwa crafts	2439
Chirechik (periodical):	
translations	1256
Chiricahua National Monument, gen-eral information	11460
Chironomid midges, see Flies	
Chironomus dorsalis, see Flies	

# JANUARY-DECEMBER

	Entry		Entry
	Chiroprody:		Chromatograms, thin layer, radioas-
	podiatrists, employment outlook...	9398	say, blueprints for zonal
	podiatry, regulating practice in		scraper
	D.C., amend act, report	6326	11864
	Chiropractors:		Chromatography, gas, persistence of
	employment outlook	9392	telodrin and DDT on sweet
	Federal employees compensation		corn
	act, amendment to permit serv-		13564
	ices, hearing	17885	Chromic oxide, and conventional
	Chittenden Nursery, white pine root		methods, comparison in diges-
	rot situation	773	tion trials using steers fed pel-
	Chiu, Hong-Yee, supernovae, neu-		leted rations
	trinos, and neutron stars	14845	19105
	Chleck, David, development of krypt-		Chromite:
	ton-85 as universal tracer	19235	beneficiating low-grade chromites
	Chlorides, see chlorides by names, e.g.		from Stillwater complex,
	Titanium chlorides		Mont.
	Chlorinated hydrocarbons, see Hydro-		13124
	carbons.		mineral industry survey, monthly
	Chlorination:		mining methods and costs, Mount
	fluidized bed processes, titaniferous		mine
	slags and ores	1436	5475
	reactions, investigation using C-14	9519	Chromium:
	Chlorine, accident on Mississippi		alloys, electroslog remelting effect
	River, Mar. 23, 1961	5663	on plasticity, USSR study
	Chlorites (minerals):		chromium and derived alloys, me-
	water content	12512	chanical properties
	Chlorophyll:		chromium-gadolinium system, anal-
	and its analogues—		yses of alloys to determine
	formulation of pheophytines		probability of components al-
	from, in darkness and upon il-		loying
	lumination	5912	18687
	paramagnetic properties, USSR		chromium-rhenium and derived al-
	study	21402	loys, mechanical properties
	Chlortetracycline, biosynthesis stimu-		21731
	lation by aromatic amino acid		mineral industry survey, monthly
	antagonists, USSR study	9018	3319
	Choate, Grover A., forests of Wyo-		minerals yearbook chapter
	ming	12482	20470
	Chocolate, see Confectionery.		pentavalent complexes, investigated
	Choctawatchee Bay:		by means of electron-spin reso-
	engineer report—		nance
	departmental edition	10488	14622
	document edition	10159	research, Bureau of Mines, July
	Chodes, M., bio-instrumentation for		1953-July 1961
	control of pressure chambers	21825	7429
	Choi, Tai Ung, see Tai Ung Choi.		Chromium boride pseudobinary sys-
	Chokecherry, livestock poisoning in		tem TiB <sub>2</sub> -CrB <sub>3</sub> , corrosion re-
	Western States, reducing		sistance
	losses	20915	11324
	Cholera, see Hog cholera.		Chromium compounds, poisoning, pre-
	Choline, cholinergic processes in pa-		vention, USSR studies
	thology, USSR study	5046	20297
	Choosing a career, economic frame-		Chromium diboride, see Chromium
	work	7397	boride.
	Choristoneura fumiferna, see Spruce		Chromosomes:
	budworms.		connection with nucleolus, USSR
	Chou, Pel Chl. decay of strong plane		study
	shocks in ideal gas	20528	16473
	Chow, Bacon F., effect of cold on pro-		giant, RNA variations of Chirono-
	tein metabolism	4251	mus dorsalis during metamor-
	Chow, Frank S., relief	15643	phosis, USSR study
	Christensen, Raymond P., how United		4980
	States improved its agricul-		human chromosomal diseases,
	ture	8476	USSR study
	Christmas, 5-cent commemorative		5333
	stamp (poster)	21831	rearrangement in microspores of
	Christmas quadrangle, Ariz., geology	19774	Tradescantia paludosa under
	Christmas trees:		factors of space flight, USSR
	cultural practices for growing in		study
	Pacific Northwest	2363	4899
	harvesting and marketing for Pa-		Chromosphere, see Sun.
	cific Northwest growers	2366	Chronic diseases, see Diseases.
	harvesting and marketing regula-		Chronic Diseases Division, mental re-
	tions, Oregon and Washing-		tardation program
	ton	10586	15059
	Montana, exports reach lowest level		Chrysanthemums, quarantine import
	since survey was begun	21326	requirements of Denmark
	selecting good area for growing in		20905
	Pacific Northwest	2362	Chrysler Corporation:
	Christopher, Joe F.:		Defense Operations Division, leas-
	Mississippi forest industry statis-		ing of electronic data process-
	tics, 1962	8699	ing system, unnecessary costs,
	pulpwood price trends in Midsouth,		GAO report
	1937-63	18078	10621
			tanks, excessive charges, GAO re-
			port
			4757
			Chualar, Calif., railroad accident
			6866
			Chukchi Sea, oceanographic cruise by
			USCGS Northwind, July-Sept.
			1962, report
			11961
			Chun, Yoo Sel, relief
			298, 1895
			Chung-kuo hsin-wen (periodical):
			translations
			7334, 9109
			Chung, Lee Shue, see Lee Suey Jom.
			Chura, Nicholas J., wildlife abstracts,
			1956-60
			10581
			Churches, churchgoers and sectarians,
			scientific-athelistic propaganda
			and criminal-legal struggle
			against crimes of, USSR
			study
			20369
			see also names of churches.



# INDEX 1964

	Entry		Entry
Chute, A. Hamilton, retail merchandising and promotion-----	15080	Circuits--Continued	
CI series-----	1591	reliability and redundant circuitry	21737
CIA, <i>see</i> Central Intelligence Agency.		simple, for continuously monitoring	
Cicadellidae, <i>see</i> Leafhoppers.		thermocouple sensory-----	20546
Cicadelloidea, bibliography-----	11744	solid, use in satellite instrumentation-----	14836
Cicolani, Luigi S., return trajectories from moon-----	7527	transistorized and printed circuits, servicing techniques, guide-----	15001
Cider, apple, making and preserving-----	9940	transistorized trigger circuit is frequency controllable-----	13197
Ciepluch, Carl C., spontaneous reignition of previously extinguished solid propellants-----	9580	transmitter circuit applications-----	20687
Cigarette tobacco, <i>see</i> Tobacco.		Circular EC series-----	2295-96
Cigarettes:		Circulars, <i>see</i> names of departments, etc., issuing circulars-- <i>also</i> subjects.	
blended, flavor contribution of Turkish tobacco-----	13571	Circulation of blood, <i>see</i> Blood.	
industry, review of 1963, outlook for 1964-----	6008	Circulation of money, <i>see</i> Money.	
Cigars:		Circulatory system, <i>see</i> Cardiovascular system.	
imported, paper bands and labels, marking requirements, report-----	10264	Cirincione, Paul A., biological effects of lasers, ocular damage-----	20702
manufactured of imported tobacco in bonded warehouses, amend tariff act, report-----	8313	Citellus, <i>see</i> Ground squirrels.	
Cincinnati, Ohio:		Cities and towns:	
community improvement program, weaknesses in administration, GAO review-----	10626	area redevelopment bulletin-----	3262
occupational wage survey-----	14700	characteristics of urban depressed areas-----	7416
principal electric facilities, map-----	674	China, mainland cities-----	10068
profile of youthpower-----	10480	city child, preparing him for his school, school-home cooperation in low-income neighborhoods-----	15854
Circuit Courts of Appeals, <i>see</i> Judges.		city of future being created today, USSR study-----	20324
Circuit judges, <i>see</i> Judges.		community and economic development-----	11827
Circuit switches latching relay in response to signals of different polarity-----	13194	community mental health advances-----	11444
Circuits:		community renewal program, policy-----	3182
design, adaptive programing techniques-----	20972	consumer expenditures and income, detail-----	18624-625
electric--		emergency health manpower planning-----	13402
controls transients in SCR inverters-----	14815	emergency health preparedness, community-----	20755
efficient circuit triggers high-current, high-voltage pulses-----	14820	family food budget costs, intercity differences-----	2970
reliability boosted by soldering disconnect pins to sockets-----	9563	family income in metropolitan areas, 1960-----	6034
voltage, adjustable, with linear temperature variation-----	9560	Federal services to help communities plan with youth-----	5846
with ferrite for producing high-voltage nanosecond pulses-----	20409	Federal wage-hour law, operation, general information-----	20876
electromagnetic circuits and devices-----	20691	finances-----	19288
electron tube circuits, Navy aeronautical equipment handbook-----	9683	finances of municipalities and township governments, census of governments, 1962-----	15305
electronic circuit analysis, AF manuals-----	19136-137	announcement and order form-----	21025
fire control radar special circuits, trainee's guide-----	20683	focus on clean water, action program for community organizations-----	13397
integrated, application to telemetry systems-----	14838	governmental organization for metropolitan areas (paper)-----	15971
low-power transistorized circuit provides staircase waveform-----	14818	grant applications-----	
mathematical simulation and electric circuits-----	9315	local review, report-----	4542
microcircuit elements, chemical formation-----	7996	metropolitan planning effectiveness-----	17877
microwave circuit applications-----	20690	national survey-----	4583
monostable circuit with tunnel diode has fast recovery-----	14816	health program, research opportunities-----	9722
novel circuit provides pulse stretcher with NOR gate-----	20657	health workers, community's interest in health and safety of (remarks)-----	14672
oscilloscope circuit applications-----	20689	highway transportation planning in urban areas, hearings-----	411
printed--		highways, quarter century of financing, 1937-61-----	18928
compact coaxial connector adds reliability-----	13207	industrial site survey, how to make-----	1755
manufacture of high-reliability boards, application of nuclear techniques-----	13718	mass transportation act of 1963--law-----	13913
modular chassis simplifies packaging and interconnecting of circuit boards-----	13165	report-----	12057
use of photographs speeds inspection of boards-----	16672	meeting needs of older persons, State's role in community planning and action-----	9887
receiver circuit applications-----	20688	metropolis in transition, local government adaptation to changing needs-----	831

# JANUARY-DECEMBER

try

737

546

836

001

197

887

-96

702

262

416

068

854

324

827

444

182

625

402

755

970

034

846

876

288

305

025

397

971

542

777

583

722

672

411

928

1755

3913

2057

9887

831

Entry	Entry
Cities and towns—Continued	
metropolitan America, bibliography	19599
metropolitan areas—	
growth, 1960-63, current population reports	17104
health organization and staffing	3110
pattern for construction safety program (remarks)	13036
standard statistical—	
estimates of population	8127, 19300
Journey to work, commutation streams, etc.	1826
list, revised Dec. 1963	1821
titles and definitions	11877
U.S. and Puerto Rico, 1963, defined by Bureau of Budget, map	13775
type of place, demographic, etc., data for States by urban-rural and metropolitan-nonmetropolitan residence, census of population, 1960	17114
wage trends for occupational groups	20448
wages and related benefits, United States and regional summaries, 1962-63	16590
metropolitan planning, effectiveness	17877
metropolitan planning, national survey	4583
modern sewage treatment plants, how much do they cost? guide to estimating construction costs	20765
mortgage foreclosures in 6 metropolitan areas	10669
North and West, civil rights, public schools, Buffalo, N.Y.	10097
school facilities, planning, problems	8491
school-home partnership in depressed urban neighborhoods	10471
size of place, social and economic data by size of urbanized area, etc., census of population, 1960	11913
small—	
north central region, 1961, consumer expenditures and income	11272
northeastern region, 1961, consumer expenditures and income	11269
western region, 1961, consumer expenditures and income	11271
small town organizes basic services for its aging	15171
smaller communities program in operation	4660
social aspects of urban development, seminar	7855
soil surveys, urban areas, authorization, report	17536
space exploration effects on urban life, conference proceedings	3004
transportation, calibrating and testing gravity model with small computer	5669
unemployment rates in larger cities, ARA staff study	15255
urban development, evaluation of soils and use of soil surveys for engineering purposes	2319
urban functions, local and areawide performance	15783
urban growth, effect on streamflow regimen of Permanente Creek, Santa Clara County, Calif.	18139
urban planning assistance program, report	3971
urban water supply and sewerage systems, State and local authority to provide orderly development	11578

Entry	Entry
Cities and towns—Continued	
see also Redevelopment (city planning, etc.)—also subjects.	
Citizens Band of Potawatomi Indians of Oklahoma, see Potawatomi Indians	
Citizens committee for better schools	17912
Citizen's guide to aircraft noise	4674
Citizens of United States:	
abundance and liberty for all as national goal, blueprint for action (address)	15024
citizens abroad, tax guide	859
facts, from recent Census Bureau surveys	11908
mind your world, guide to international understanding	18960
see also American nationals.	
Citizenship:	
becoming a citizen series—	
our American way of life	12535
our Government	18157
our United States	14360
teacher's guide	12536
diversity, eliminate jurisdiction of Federal courts under direct action statutes—	
law	17298
reports	6329, 10208, 21229
duties and obligations in a democracy (remarks)	11974
education for citizenship in modern world (address)	9805
Federal textbooks on citizenship	12535-536, 14360, 18157-158, 19810
our citizenship, troop topics, DA pamphlet	17043
privileges and responsibilities of Negro in emerging culture (address)	15366
publications, price list	18888
see also Naturalization.	
Citizenship Day, bulletin	14359
Citrus fruit:	
Australia and New Zealand, producers and markets	765
consumer purchases of fruit, juices, drinks, and other products	3364
foreign agriculture circulars	3520
production, use, value by States, 1962-63 and 1963-64	20846
spillage, biphenyl control, influence of time, temperature, and carbon venting	7930
City of Clinton Bridge Commission: creating, etc., reviving act—	
hearings	17663
report	10210
City of industrial chemistry (USSR periodical):	
translations	1256
City planners:	
employment outlook	9413
examination announcements	217, 21063
City planning, see Redevelopment (city planning, etc.).	
Ciudad Juarez, Mexico:	
relocation of Rio Grande, convention with Mexico	2137, 7799
relocation of Rio Grande, convention with Mexico, implement—	
hearings	4580-81, 8378
law	10143
reports	4521, 4566, 6332, 8342
Civic action, military role in nation building	4277
Civil Aeromedical Research Institute:	
bibliography of recently translated material	139
reports	1789-91, 4312-18, 5994-99, 13726-737
résumé and index, 1961-62	4312
technical publication	139

# INDEX 1964

	Entry		Entry
Civil aeronautics, <i>see</i> Aeronautics.		Civil rights:	
Civil Aeronautics Administration,		act of 1963—	
title listing of CAA publica-	17970	hearings	4502, 4507
tions		reports	351, 4479
Civil Aeronautics Board:		act of 1964—	
annual report, 1963	6060	appropriations to support pro-	
applications, etc., filed with CAB	3258	grams authorized, supplemen-	
appropriations, 1964, supplemental,		tal, proposal	15405
proposal	12170	hearing	14017
appropriations, 1965, hearings	10290	importance (address)	21653
CAB charged with safety promo-		law	13900
tion, accident prevention etc.		report	13959
(remarks)	19317	role of Community Relations	
efficiency and economy in opera-		Service in implementing (ad-	
tions, report	4452	dresses)	15377, 17106, 21100
orders, economic, E series	3825	services rendered by Community	
press releases	3874	Relations Service (address)	17165
procedural regulations, PR series	3938	summary	17129
regulations	4365	to further realization of national	
regulations, economic, ER series	3429	goals (remarks)	15035
regulations, revisions	6062,	apprenticeship reports by State ad-	
10088, 11924, 13791, 15337-388,		visory committees	6076
17124-126, 19318.		Camden and environs, public	
reports, economic and safety en-		schools	6073
forcement cases	6061, 8147, 17123	employment in Maryland, report	6075
weekly summary of orders and reg-		enforcement responsibilities of po-	
ulations	4152	lice (address)	15376
Civil affairs:		equal employment opportunity pro-	
military civic action, troop topics	11844	gram in Post Office Depart-	
soldiers become governors, World		ment, summation (address)	15028
War II, special studies	9493	housing in Boston, report	1838
Civil Air Patrol, air reservist (peri-		human rights and attainment of	
odical)	3235	peace (address)	13025
Civil air regulations, <i>see</i> Aeronautics.		human rights at home and abroad,	
Civil aircraft, <i>see</i> Aircraft.		struggle (remarks)	11250
Civil aviation, <i>see</i> Aeronautics.		human rights in law and religion,	
Civil Aviation Organization, Interna-		recent developments in Soviet	
tional, <i>see</i> International Civil		bloc, hearings	8381
Aviation Organization.		human rights, some next steps (ad-	
Civil aviation personnel, <i>see</i> Airmen.		dress)	1599
Civil defense, <i>see</i> Civilian defense.		Mississippi, administration of ju-	
Civil Defense Office:		stice, report	8155
annual statistical report, 1963	6064	police-minority group relations,	
appropriations, 1965, hearings	10290	California, Advisory Commit-	
Architectural & Engineering Devel-		tee report	1839
opment Program, highlights	11927	President's program, 1963, hear-	
Federal guidance for State and lo-		ings	6514
cal civil defense, FG series	6065,	public accommodations, eliminate	
8151-53, 13793, 17127		discrimination—	
handbook series	10094, 17128	hearings	4577, 6514
information bulletins	3594	report	6465
instructor's guide IG series	6067,	public education, Civil Rights Com-	
8154, 13794		mission staff reports	11931, 21049
leaflet	15342	public schools—	
miscellaneous publications MP		cities in North and West, Buf-	
series	6069, 10095-96, 15343	falo	10097
publications indexes	6069, 15343	segregation and desegregation	
report, 1963	11925	conference, synopsis	6074
technical reports	4372-73,	Southern States, 1963	10098, 15347
15344-346, 21048		women, report of Committee on	
Civil engineering:		Civil and Political Rights	13381
design, construction, and mainte-		Civil Rights Commission:	
nance of airports and heli-		appropriations, 1964—	
ports	6615	hearings	515
Navy design manual, changes	3199	law	1974
Civil engineers:		appropriations, 1965—	
Air Force (periodical)	3233	hearings	10288
career opportunities, Veterans Ad-		law	17386
ministration	20870	reports	10245, 21193, 21233
Navy (periodical)	3779	civil rights digest, special bulletin	17129
Civil procedure:		extend—	
District courts, rules, proposed		hearings	4502, 4507, 6514, 14017
amendments	9903	law	13900
judiciary and judicial procedure,		reports	351, 4479, 13959
D.C. code of laws—		members, nomination	
revise, codify, enact—		Freeman, Frankie M., hearing	17881
law	1970	Patterson, Eugene C., hearing	17881
report	509	Civil service:	
text, revision notes, etc	4503	apportionment requirement for tem-	
unification of civil and admiralty		porary summer employment—	
procedure, amendments	9903	hearing	4591
		report	338

# JANUARY-DECEMBER

Entry	Entry
Civil service—Continued	
career opportunities—	
environmental health.....	5652
Federal service for college students.....	4388
Internal Revenue Service.....	4833
Labor Dept. management intern program.....	7355
National Center for Health Statistics.....	7691
National Park Service.....	5566
resource management, forestry, administration, minerals, etc., Land Management Bureau.....	18649
safety officers, Army Department and other Federal agencies.....	8162, 19328
scientific careers in Agricultural Research Service.....	5839
trades and crafts.....	13805
women.....	21061
challenges and rewards of Government service (address).....	11936
civil service journal.....	3327
cooperative work-study positions, opportunities for college students.....	17132
examination announcements.....	
accountant.....	207, 15350
accountant and auditor.....	8159, 21052
accounting technician and accounting clerk.....	1844
amendments.....	11933, 15349
aerospace technology positions, amdt.....	17130
agricultural commodity grader (fruit, etc.).....	15361
agricultural market reporter, amendment.....	15348
amendments concerning salary rate for positions in Government under general schedule.....	4389, 15357
apprenticeship and training representative.....	13807
assistant State veterans employment representative.....	17142
astronomer in Federal agencies in Washington, D.C. area.....	13798
astronomers, discontinuance notice.....	11942
auditor.....	207, 13796, 15350
blindry worker.....	4378
amendment.....	11932
biochemist, amdt.....	4375
biologists, microbiologists, and physiologists, amdt.....	21055
bookbinder.....	4396, 19327
cartographer.....	10112
discontinuance notice.....	4385
chemistry, mathematics, metallurgy, physics.....	11949
clerical positions.....	17143
communications cryptographic coding clerk.....	4387
correctional officer, discontinuance notice.....	6087
cotton technologist, discontinuance notice.....	4386
crop insurance fieldman and supervisor.....	8164
current.....	1841-42, 4381-83, 6084-85, 8165-66, 11937-941, 13799-802, 15354-355, 17133-134, 19329-332
cylinder pressman.....	4398
design patent examiner, discontinuance notice.....	21056
dietitian.....	4399
economist.....	13808
education research and program specialist, discontinuance notice.....	6086
engineering and science trainee.....	19338

Entry	Entry
Civil service—Continued	
examination announcements—continued.....	10100, 13810
engineers.....	13806
supplement.....	210
equipment specialist, amdt.....	6079
exhibits technician, exhibits specialist, amdt.....	11952
Federal administrative and management positions.....	15358
Federal service entrance examination, 1965.....	10113
financial analyst.....	21057
discontinuance notice.....	11935
fireman.....	19334
fishery biologist.....	10105
food and drug officer, Food and Drug Administration.....	13803
food supervisor, lead foreman.....	11955
foresters.....	211, 11946
geologist.....	4397, 19339
hearing examiner.....	4400, 13811
amendment.....	6082
hydrology, professional positions.....	21060
immigration patrol inspector.....	208
industrial hygienist, amendment.....	6081
labor management relations examiner.....	17144
laboratory and clinical technicians, in health research, supp.....	4394
librarian.....	1840, 21053
librarians, Veterans Administration installations.....	8160
mediator.....	15362
medical illustrator, VA positions.....	15360
medical officer, amdt.....	4376, 13795
medical photographer, discontinuance notice.....	15356
medical photographer, VA positions.....	15360
medical record librarian.....	11953
discontinuance notice.....	11944
medical technologist.....	6103, 8158
supplements.....	4395, 21062
meteorologist.....	19340
minimum pay announcement.....	6077
navigational scientist.....	15351, 21051
oceanographer, amdt.....	6080
operations research analyst.....	213, 17145
patent aid.....	1847
patent examiner.....	213, 11954
discontinuance notice.....	11943
pharmacist.....	4392
pharmacologists, amdt.....	6099, 21059
policeman.....	10101
postmasters.....	13797, 15352-353, 21054
press operator, offset duplicating, amdt.....	17131
pressman, cylinder, and lithographic, offset, amdt.....	17131
printer (hand compositor), amdt.....	11934
printer (monotype keyboard operator and slug machine operator), amdt.....	11934
printer proofreader.....	8169
amendment.....	11934
printer (slug machine operator), amdt.....	17131
professional opportunities in Education Office.....	6100
public health advisor and analyst.....	21050
public health scientists.....	209
research scientists.....	8156
resident in hospital administration.....	6078
right-of-way appraiser.....	4393
discontinuance notice.....	1843
savings and loan examiners.....	10102
scientific illustrator, medical, discontinuance notice.....	15356

Do not order from index; see indicated entry

Page 169



# INDEX 1964

	Entry
Civil service—Continued	
examination announcements—continued	
securities investigator.....	215, 17146
social workers.....	8163
social workers, public assistance adviser, etc.....	4379
stenographers and typists.....	6102
amendment.....	206
student trainees, cooperative and vacation work-study programs.....	205
student trainees, discontinuance notice.....	4384
supervisory jobs in steamfitter, mason and laundryman trades.....	6088
television operations and maintenance technicians.....	17147
transmitter and receiver operator and maintenance technician.....	8157
urban planners.....	217, 21063
veterinarian, amdt.....	4377
veterinarian trainee.....	19337
warehouse examiner.....	13809
welfare and pension plans specialist.....	216, 6083
wildlife biologist.....	10105, 19334
examinations—	
Federal office assistant, stenographer, typist, etc., what it is and how it is given.....	1845
instructions to applicants for rural carriers.....	21058
instructions to applicants, postmaster, 4th class.....	11947
places where held.....	8168, 17140
sample questions.....	17141
answer sheet.....	6090
apprentice.....	10111
clerical abilities test.....	6091
copying from plain copy.....	6092
dexterity and perceptual test.....	6096
letter series test.....	6097
practice dictation transcript sheet.....	6093
simplified typing test.....	6095
stenographer and typist.....	212
transcript booklet, dictation test.....	6094
verbal abilities and arithmetic test.....	6089
Federal jobs overseas.....	4391
Federal personnel, fund raising for voluntary health and welfare agencies, manual.....	3705, 17136
Federal personnel manual system letters, bulletins, and installments.....	3482
Federal personnel system, Federal merit system of interest to Federal scientist and engineer.....	6101
handbook of occupational groups, etc.....	3566
handbook X-118.....	3954
handbook X-118C.....	19336
investigation, expenses, report.....	4545
job opportunities, local and regional examinations.....	1846, 4390, 10106, 11948, 17137, 19335
opportunities for returning Peace Corps volunteers.....	11951
position-classification standards—qualification standards.....	3853
classification act positions.....	3954
wage board positions.....	19336
recruiter (periodical).....	3328
thinking about your first job? remember Uncle Sam.....	10107
women, equal opportunity and equal pay.....	13542
working for U.S.A., applying for job, etc.....	11950
see also Civil service pensions—Government officials and employees.	

	Entry
Civil Service Commission:	
ADP training, services and sources of information, 1964-65, directory.....	19333
appropriations, 1965, hearings.....	10290
Federal career outlook letter to college students considering their careers.....	4388
hearing committee members, conducting hearings on employee appeals, guide.....	17139
interagency training programs.....	6098, 13804
pamphlets -- 4391, 10107-110, 11950-951, 13805, 15359, 17138, 21061	
report, 1963—	
departmental edition.....	81611
document edition.....	8254
Civil service pensions:	
annuity increase legislation, clarify—	
hearing.....	10336
report.....	10232
Federal Deposit Insurance Corporation assumption of costs, hearing.....	400
folding room of House of Representatives temporary employees coverage, report.....	352
laws, compilation.....	21161
retirement act, amend relative to Architect of Capitol employees—	
law.....	6178
report.....	2225
retirement benefits—	
amend act relative to annuities to surviving spouses without deduction from original annuities, hearings.....	19520
extend to certain legislative employees, hearing.....	408
increase, report.....	19463
retirement credit and fringe benefits for Federal-State service, hearings.....	15601
retirement program, liberalize, hearing.....	17887
retirement system, Federal employee facts.....	10104
thirty years retirement, hearings.....	406
Civil War, 1861-65:	
background information.....	218
maps in National Archives.....	16735
naval chronology, pt. 4, 1864.....	14996
troops quartered in Capitol, memorial tablet to honor, report.....	17555
United States on eve of Civil War, as described in 1860 census.....	10114
Civil War Centennial, commemorative postage stamp (poster).....	9697
Civil War Centennial Commission:	
appropriations, 1965—	
hearings.....	6338, 8436
law.....	13904
reports.....	8288, 8420, 13951
100 years after, newsletter.....	3815
Civil works, see Public works.	
Civilian agencies, see Government agencies.	
Civilian defense:	
act of 1950, amend—	
hearings.....	10292, 14127
law.....	15383
reports.....	10269, 12102, 14070
adult education course, illustrations, miniature.....	588
civil defense in minerals and solid fuels industries.....	16622
community and family service for civil defense, handbook.....	10094
community emergency health manpower planning.....	13402
emergency broadcast system (EBS) plan.....	8153

# JANUARY-DECEMBER

	Entry
Civilian defense—Continued	
emergency hospitals—	
central supply section.....	11539
custodians handbook.....	15053
laboratory section.....	21851
operation of generators.....	20736
pre-positioned and training, stor-	
age locations.....	15052
storage structures.....	5654
X-ray section.....	7695
emergency operating centers, pro-	
fessional guide.....	6070
emergency operations in great Alas-	
kan earthquake disaster.....	15339
Federal civil defense guide.....	203,
1835-37, 4366-70, 8148-50,	
10089-93, 11926, 15340-341,	
19319-325.	
Federal contributions available to	
State and local governments.....	15342
Federal credit unions, emergency	
preparedness, guidelines.....	652
Federal guidance for State and lo-	
cal civil defense, FG series.....	6065
Federal stockpile inventory, report,	
FG series.....	6065, 8151-53, 13793,
17127	
fire aspects.....	15346
food industry, management guide.....	20
food products and beverages in	
warehouses, inventories.....	35, 5833
highway signs for survival.....	6066
homemakers' estimates of how long	
food on hand could be made	
to last, study.....	15215
information bulletins.....	3594
labor participation in civil defense	
meetings, successful, on civil de-	
fense, guide.....	17128
national and State, policy resolu-	
tions of AFL-CIO organiza-	
tions.....	10326
national plan, authorities, extend-	
ing.....	10292
law.....	15383
reports.....	10269, 12102, 14070
national recovery after attack,	
emergency planning.....	19645
national warning system (NAWAS)	
operations manual.....	8152
protecting rural population against	
radioactive contamination,	
USSR pamphlet.....	21517
publications index.....	15343
radioactive fallout on farm.....	19068
rescue skills and techniques.....	4371
rescue training, light duty course,	
instructor's guide.....	6067
rural defense, knowledge for survi-	
val, newsletter to extension	
program leaders.....	3633
schools and civil defense.....	10095
shelter management plan.....	6072
State and regional defense airlift	
planning.....	17969
State salary ranges.....	10667, 19807
training literature available, list.....	15051
USSR—	
activities, translations.....	18267
civil defense and DOSAAF, trans-	
lations.....	2529, 9069
first aid measures in modern war-	
fare.....	20001
individual means of protection	
against chemicals and radia-	
tion.....	20103
military translations.....	10944,
11011, 14478, 18392, 20188	
training villages, what they	
should look like.....	14517
Western Training Center, 1964	
catalog of courses.....	4374
you and civil defense, guide for	
teachers, administrators, and	
school board members.....	10096

	Entry
Civilian employees, see Government	
officials and employees.	
Civilians:	
civilian personnel pamphlet.....	5941
industrial technology program in	
textiles.....	13822
travel and transportation, tempo-	
rary duty, general information,	
etc., Air Force pamphlet.....	60
Civilization, early civilizations, Edu-	
cational Materials Laboratory	
report.....	21264
Cladding:	
clad stainless steel production,	
USSR study.....	11042
stainless steel clad swaged powder	
fuel assembly, failure.....	10031
Clague, Ewan:	
addresses, etc.—	
June 11, 1963.....	2973
Sept. 27, 1963.....	7373
Apr. 10, 1964.....	14708
May 8, 1964.....	11267
job vacancy statistics in England	
and Israel.....	11288
major economic problems of future,	
employment, etc.....	1386
Claims:	
admiralty, settlement, amend law,	
report.....	15511
Alaska public works act, settle-	
ment—	
law.....	1958
report.....	371
bankruptcy, creditors, filing, amend	
act, law.....	255
Czechoslovakian claims program,	
completion, report.....	10584
damages to property, etc.—	
proposed appropriations to pay,	
2135, 10190, 12168-169, 17466	
proposed supplemental appropria-	
tion to pay.....	19531
defects in FHA insured homes, pay-	
ment, hearings.....	2233
Federal agencies, general proce-	
dures, GAO guidance manual.....	6753-54
inhabitants of area flooded by Rio	
Grande, result of construction	
of Falcon Dam, settlement—	
law.....	17306
reports.....	2033, 17705
international claims settlement act	
of 1949—	
amend to determine amount of	
U.S. nationals' claims against	
Cuba—	
hearing.....	17047
law.....	21158
reports.....	17538, 17837
digest of decisions 1949-62.....	19745
land scrip, lieu selection, and simi-	
lar rights, provide satisfac-	
tion—	
law.....	17404
reports.....	8298, 17773
livestock, packers and stockyards	
act provides assistance.....	5944
social security benefits, right to	
question decision.....	20798
subcontractors', conference with De-	
fense Dept. representatives,	
etc.....	2248
tort, civil actions, venue of Dis-	
trict Courts, law.....	1963
Trust Territory of Pacific Islands	
residents—	
law.....	17344
report.....	21226
uniformed services and civilian em-	
ployees of U.S., settlement—	
law.....	17416
report.....	17744

# INDEX 1964

Entry	
Claims—Continued	
war claims act, administration, investigation—	
extension, report—	4562
report—	10398
see also Unemployment Insurance—	
also names of claimants.	
Clair Engle Lake:	
designating—	
law—	21154
reports—	17626, 17844
Clamator, see Cuckoos.	
Clamps, align large rocket cases—	7487
Clams:	
certified shippers—	3311
firms canning clam products, list—	748
soft-shell clam—	10554
soft-shelled, sub-sterilization doses of radiation, effect on storage life—	5988
Clapp, Norman M.:	
remarks—	
1963—	13434
Mar. 10, 1964—	11597
Clapp, Raymond F., cost of drugs, progress report—	13532
Clapp, Roger E., directive VLF antennas for reception of transpolar sferics—	19106
Clarendon oil reservoir, hydraulic fracture treatments—	14753
Clarity in technical reporting—	10667
Clark, A. B. J., static and dynamic properties of photoelastic materials—	5596
Clark, Ann, young hunter of Pleuris—	839
Clark, Bruce J., breakup of liquid jet in transverse flow of gas—	18755
Clark, F. Bryan, micro-organisms and soil structure affect yellow-poplar growth—	8671
Clark, John B., sea-water systems for experimental aquariums—	14282
Clark, R. M., relief of estate—	19549
Clark, Raymond G., Jr., relief—	21221
Clark, Willie E., index to conferences abstracted in nuclear science abstracts—	4300, 13709
Clark Brick Co., clay deposit at South Windsor, Conn., examining and testing for lightweight aggregate use—	18668
Clark County, Wash., geology and ground-water conditions, with description of major alluvial aquifer along Columbia River—	12517
Clarke, J. F. Gates:	
Gonionota melobaphes Walsingham—	9650
neotropical Microlepidoptera, genera Orsotricha Meyrick and Pallinorsa Meyrick—	21803
Clarke, James W.:	
geophysical abstracts—	3555
bibliography of North American geology—	18114
Clarke, Joan, labor law and practice in New Guinea—	20434
Clarkia, Idaho, metamorphism of Belt series in area—	4784
Clasen, Raymond A., intravenous hypertonic urea in cerebral edema—	15237
Class struggle, on world scale, Soviet-Chinese dispute—	2731
Classification:	
books, etc., National Library of Medicine—	11457
crime, logical forms, USSR study—	14452
decimal additions, notes and decisions—	3409
Government publications available to depository libraries—	11543

Entry	
Classification—Continued	
House of Representatives, equitable system for certain positions—	
law—	21144
reports—	17549, 19486
Library of Congress—	
additions and changes, quarterly list—	3634
class P, P-PA, philology, linguistics, classical philology, classical literature—	9484
class PN, PR, PS, PZ, literature, general, etc—	18659
NASA publications, change notices—	3761
Navy enlisted personnel, manual—	7642
Navy, officers, manual—	16791
cross-reference index—	3081
scheme for elementary and secondary schoolbooks, etc., Educational Materials Laboratory report—	11481
see also names of substances, objects, etc., classified—also subjects.	
Classification bulletins, Patent Office—	7669-70.
9691-92, 15018-19, 20716	
Classification tests, see Aptitude tests.	
Classified matter, see Confidential material.	
Classrooms, facilities planning aids, college and universities—	14178
Clausen, Knud E., nursery selection affects survival and growth of birch—	778
Clay, Cassius, boxing activities, investigation, hearings—	14150
Clay, Eleanor W., monthly list of publications and motion pictures—	3741
Clay:	
Bovill deposit, Latah County, Idaho, geology, etc—	5480
construction products, current industrial reports—	3390, 10049
dilute slurries, electrical dewatering—	16632
examining and testing clay from Hartford County, Conn. for lightweight aggregate use, Clark Brick deposit at South Windsor—	18668
expansion properties for lightweight aggregate production—	1434, 9510
lightweight aggregate industry, expanded, in south-central United States—	20478
minerals yearbook chapter—	21685
mining, processing, and utilization, methods and practices, Kraftt Co., Fremont, Calif—	1404
nitric acid process for producing alumina from clay—	11337
refractory clay deposits of Utah—	13106
sediments, removal of water and rearrangement of particles during compaction—	14346
see also Kaolin—Montmorillonite.	
Clay County Hospital, relief—	1914, 2168
Clayton, J. E., mechanical picker attachments for harvesting cotton research plots—	4191
Clayton, Rebecca K., relief—	6433, 8207
Clayton act, see Monopolies.	
Clean air, hearings—	10434, 15819
Clean air act, see Air pollution.	
Clean room and work station requirements, controlled environment, Federal standard—	4723
Clean water is everybody's business, filmstrip and speaker's guide—	13420

# JANUARY-DECEMBER

	Entry
Cleaning:	
equipment and supplies, Federal item identification for supply cataloging	12294
equipment and supplies, Federal item identification guides for supply cataloging, supplements	3475
laboratory-industrial, techniques and materials	14167
materials, CEC fact sheet	11742
services, industry wage survey	16607
Cleaning compounds:	
detergents to comply with standards of decomposability—	
hearings	8395
print additional copies, reports	2101, 2199
reports	4530, 17627
economic potential of detergents made from fats and oils	10455
effects of miscellaneous wastes on mesophilic activated sludge	20973
HLB of nonionic additive influence on detergency of alkaline cleaners containing anionic surfactant	9686
laboratory-industrial cleaning techniques and materials	14167
synthetic detergent industry, review of 1963, outlook for 1964	4329
synthetic detergents in water and wastes, including analytical methods and physiological effects, bibliography	7690
Clear Creek:	
powerhouse, name Judge Francis Carr Powerhouse—	
law	17413
reports	10220, 17780
Clear Creek County, Colo., altered wallrocks in central part of Front Range mineral belt	4795
Clear Lake National Wildlife Refuge: administration—	
law	17425
reports	2093, 17595
Clearinghouse Exchange, publications of State departments of education, secondary education personnel	14170
Clearinghouse for Research in Child Life	17120
Clearwater County, Idaho, Idaho batholith	4785
Cleary, Joseph W., theoretical aerodynamic characteristics of sharp and circularly blunt-wedge airfoils	14904
Clemens, Thomas D., research grants and contracts, programed learning and self-instructional media	2287
Clemmons, Dewey L., Jr., Echo I induction system	13224
Clergy:	
employment outlook—	
Protestant clergymen	9385
rabbis	13047
Roman Catholic priests	13048
social security—	
elect coverage, extend time, amend act—	
law	21142
reports	8316, 17833
general information	9771
Clerical workers, see Clerks.	
Clerks:	
clerical abilities test, sample questions	6091
clerical occupations for women, today and tomorrow	20884

	Entry
Clerks—Continued	
examination announcement	17143
see also Communications coding clerks—also names of departments, etc., where employed.	
Cleveland, Harlan: addresses, etc.—	
Dec. 1, 1963	7769
July 23, 1964	20821
Cleveland, Mont., quadrangle, geology, Bearpaw Mountain, Blaine County	18104
Cleveland, Ohio:	
challenge to Cleveland (address)—	8014
occupational wage survey	7400
principal electric facilities, map	674
Cliff, Edward P., remarks, Oct. 28-30, 1963	10588
Cliff, Rodger A., coding analog variable for constant percentage error	9605
Clifford Davis Bridge, designate, report	8347
Clifton, G. L., relief	17687
Clifton, N.J.:	
Animal Quarantine Station, sale and relocation—	
hearings	6336
law	19400
reports	10242, 17768
occupational wage survey	16595
Climate:	
Alaska, summary, 1922-52	5753
Alpine, biochemistry	12971
California, summary 1931-52	15152
climatic factors affecting regimes of rivers of USSR	20048
climatography of United States—	
climatic summary of United States, supplement for 1931-52	
1656, 5753, 13517-518, 15152	
decennial census of U.S. climate	
15154-155, 19016-25, 20877-878, 21919-920.	
climatological data—	
Antarctic stations	5754, 13519
by States, etc.	3329
national summary	3330
climatology of heat balance, USSR study	9198
control methods, USSR study	5112
illness and treatment in various climatic conditions, USSR	20228
local climatological data	3691
monthly data for the world	3733
Polish climatological research	2737
relationship to eastern white pine blister rust infection hazard	6742
sockeye salmon and related limnological and climatological investigations, Brooks Lake, Alaska, 1957, ecological studies	21318
temperate, formation of lake ice	8507
Texas and adjacent Gulf waters	15151
Virginia, summary, 1931-52	1656
Weather Bureau climatological record forms for observations, history	13529
Climatography, see Climate.	
Climatological data for Antarctic stations	5754, 13519
Climatology, see Climate.	
Cline, Denzel R., hydrology of upper Black Earth Creek basin, Wis.	821
Clinical Center, National Institutes of Health:	
normal volunteer program	1504
nursing	14949
Clinical physiology, see Physiology.	
Clinical physiology and methods of functional diagnosis of kidneys, USSR	20059



# INDEX 1964

Entry	Entry
Clinical Spinal Cord Injury Conference, scientific session, proceedings, 1962.....	7829
Clinical thermometers, <i>see</i> Thermometers.	
Clinics:	
hospital outpatient services, surveying procedures guide.....	9718
psychiatric:	
adolescent outpatient, statistical report, 1962.....	13287
outpatient community service activities, State and U.S., 1962.....	13286
outpatient, data by State economic areas, 1961.....	13282
outpatient, directory, 1963.....	14948
outpatient services in U.S., 1962, patients data.....	5354
retarded children, orientating parents.....	11919
Clinton, Iowa:	
bridge across Mississippi River—	
hearings.....	17663
report.....	10210
Clocks and watches:	
Borghesi astronomical.....	21797
horological industry, importance to national defense, hearing.....	17865
radium-painted dials, health hazards.....	18901
stop watch—	
laboratory, Federal standard.....	19712
solenoid permits remote control and assures restarting.....	13161
watch repairmen, employment outlook.....	9437
watches, watch movements, etc. Tariff Commission report.....	21896
Clones:	
fruit, survey, United States.....	15196
survey of stone fruit in United States.....	1676
two-clone crosses in alfalfa, performance.....	5864
Close, Kathryn, Cuban children away from home.....	13779
Closed loop television system, mark 2 mod 2, description, operation and maintenance.....	13350
Closures, for containers, current industrial reports.....	3390, 10050
Cloth, <i>see</i> Textiles—also names of textiles.	
Clothing:	
and individual equipment, Federal item identification guides for supply cataloging.....	12296
supplements.....	3477
apparel, current industrial reports.....	13751
apparel, statistical data, principal sources, list.....	17069
chemical and biological protective overgarments, behavior of liquids on various cords for seams.....	11590
consumer information, price list.....	21842
current industrial reports.....	1809
employment outlook in apparel industry.....	9438
individual protective materials, decontamination, USSR study.....	20419
maintenance specialist, suggested training program.....	15839
men's apparel, current industrial report.....	3390
retail apparel, etc., stores, employee earnings.....	13059
standardizing design in CEMA countries.....	20325
women's and misses' dresses, industry wage survey.....	9469
women's apparel, current industrial reports.....	3390
<i>see also</i> names or types of clothing.	
Clothing fabrics, <i>see</i> Textiles.	
Cloud modification, <i>see</i> Weather control.	
Clouds:	
cover, vortex structure according to weather satellite data.....	16730
cumulus, power spectral measurement of atmospheric turbulence.....	20596
noctilucent, USSR studies.....	12027, 12968
orographically induced, observed by TIROS satellites, identification and significance.....	20966
precipitation, USSR study.....	7183
satellite Nimbus pictures—	
errors in geographic referencing.....	5520
geographical grid.....	9576
television photography—	
TIROS V, meteorological satellite data, catalogue.....	9882
TIROS VI, meteorological satellite data, catalogue.....	19026
warm, rain formation, statistical theory of microphysical mechanisms, Chinese study.....	945
Clover, <i>see</i> Red clover.	
Clover mites, control.....	15209
Clutches (machinery):	
quick-acting, disengages idle drive motor.....	20549
Clyne, Patrick J., relief.....	17697, 21176
Coal:	
analyses of tippie and delivered samples.....	11343
anthracite—	
effect of gamma radiation.....	9508
metallurgical briquets as blast furnace fuel.....	7459
oxidation with nitric acid, products obtained.....	20509
Pennsylvania, mineral industry surveys.....	3843
Pennsylvania, production, preliminary estimate, monthly.....	3844
ash, slag, measurement and significance of flow properties.....	9495
bituminous—	
gasification with oxygen, etc.....	7443
high-volatile A, hydrogasification.....	7453
pressure carbonization to produce high-BTU gas.....	11330
bituminous and lignite—	
distribution, quarterly.....	3282
minerals yearbook chapter.....	1399
carbonizing properties—	
Buchanan, Dickenson, Russell, Tazewell, and Wise Counties, Va.....	5496
Letcher County, Ky.....	9528
chemicals, mineral industry survey, monthly.....	3336
chemicals, minerals yearbook chapter.....	21686
coal chronicle, recently published items, summaries.....	3331
foreign market potential for U.S. coal.....	219
correction sheet.....	4401
foreign trade reports.....	4113
gasification in presence of gamma rays.....	7442
gasification, underground, bibliography.....	5472
hydraulic hoisting, developing lock-hopper feeder.....	7431
hydrogenating.....	
unconventional methods.....	13108
international trade, monthly inventory.....	3604
mass spectrometric techniques, advances.....	1437
Mines Bureau, research and technological work.....	21691

	Entry
Coal—Continued	
moisture, influence of processing variables on determination	13116
neutron-moderation moisture meter application	19231
New Mexico, hydrogenation at short residence and high temperature	14752
optical activity in oils derived from coals	20501
pilot-scale fluidized feeder utilizing zone fluidization	16638
preparation characteristics	
Brooke County, W. Va.	14746
Hancock County, W. Va.	14746
Marshall County, W. Va.	14746
Ohio County, W. Va.	14746
Russell County, Va.	5488
report, weekly	4147
resources	
Alabama, coal-bearing rocks	12508
Beaver County, Pa.	2417
Lawrence County, Pa.	19771
western Pennsylvania (series)	2417
	19771
western coking, bulk density studies on commercial blend	18686
Willett Range deposits	2995
see also Ashes—also headings beginning Coal.	
Coal chronicle (periodical)	3331
Coal Creek, Precambrian quartzite-schist sequence, relationship to Idaho Springs Formation, Front Range, Colo.	18135
Coal dust:	
control methods for continuous mining of coal	2982
explosions, experimental	5490
ignition, preventing by inerting	21713
methane-air mixtures, ignition, etc.	7447
Coal mines and mining.	
abandoned mines, controlling acid mine drainage, committee print	410
abandoned mines, seal off, hearings—anthracite, long-wall mining in Pennsylvania	8395
	7455
anthracite mining industry, wage chronology, 1930-59	14689
bituminous coal mining, labor market developments	4658
burning refuse banks, survey	7428
Federal coal mine safety act, amend hearings	6351
hydraulic hoisting of coal, developing lock-hopper feeder	7431
hydrologic influences of strip mining (series)	4792
industry, safety organizations and activities of award-winning companies	16625
injuries and employment, monthly report	3332
injury experience, analysis of safety factors, etc.	2983
Kizel basin, role of microbiological factors in increasing corrosiveness of mine water, USSR study	2580
leases of public land, raise limitation, etc.—	
law	17385
report	15560
passageway, sealing through borehole, progress report	13129
Pennsylvania, bituminous strip mine spoils, 2d year results of hybrid poplar test plantings	14321
safety rules for installing and using electric equipment	20476
strip mining—	
operations, Beaver Creek basin, Ky.	
description of physical environment	4792

	Entry
Coal mines and mining—Continued	
strip mining—continued	
operations, Beaver Creek basin, Ky.—continued	
influences on hydrologic environment	10643
predicting outcrops of spoil banks	772
Wilkeson area, Wash., study—see also Mine accidents—Mine ventilation	5498
Coal Research Office:	
annual report, 1964	11956
press releases	3875
research and development reports	219, 4401
Coal tar:	
imports of products, 1963	16888
intermediate, products industry	6003
Coal washing:	
cleaning trials, Pierce County, Wash., washability studies	21711
refuse, use for production of lightweight aggregate	13125
Rocky Mountain coals, performance of Baum jigs	2992
Coast and Geodetic Survey:	
charts, sell for not less than cost—law	17300
reports	12224
commissioned officers, crediting military service in computing Reserve retired pay—law	21128
reports	15504
commissioned officers dependents, manual for civilian physicians and dentists providing care	2254
director and deputy director, appoint from civilian life, authorize, report	12205
magnetic hourly values	1848-49
magnetograms MHV series. 4402-4, 6104, 10115-116, 11958, 17149, 19341	8170
nautical chart manual	8170
nautical charts and related publications, catalog	11957
press releases, CGS series	3876
publication notice, PN series	3950
publication series	8170
radio aviation charts, sell for not less than cost, hearing	2236
technical bulletin	4407
Coast Guard:	
appropriations for vessels, etc., authorization—	
hearings	6368, 6501
law	8220
reports	6273, 6278, 6298, 6466
aviation story	6114
career opportunities, after college, OCS	6111
Coast Guard reservist	3333
communications manual	8177
court martial cases, report 1963	8461
electrical equipment for merchant ships, approved list	19345
enlisted personnel, retirement percentage limitations, remove, hearings	6367
facilities, State-by-State listing	10329
Florida, inspection report	14012
history of its battles in Rum War, 1920-35	10122
manual, national search and rescue, amendment	222
marine investigation regulations, etc.	1851
nominations of James D. Craik, Louis M. Thayer, Jr., and Albert J. Carpenter, hearings	4576
objectives and mission	10123
oceanographic reports. 11961, 13814-815	

# INDEX 1964

	Entry		Entry
Coast Guard—Continued		Coating materials—Continued	
officers, promotion system, establish, hearings.....	6367	fused fluoride coatings as solid lubricants in liquid sodium, hydrogen, vacuum, and air.....	16686
passenger vessels, rules and regulations.....	13816	glass reinforced plastic for propeller shafting, Navy instruction manual.....	9763
Philippine nationals enlistment, inquiry.....	2115	luminescent and reflective, as visual aids for night aircraft carrier landings.....	13328
publications, price list.....	7685	oxidation resistant—	
validate per diem allowances to members assigned to Reserve Training Center, Yorktown, Va.—		molybdenum alloy, diffusion effects at 2,500° F.....	18732
law.....	17294	molybdenum alloy sheet.....	18733
reports.....	12062, 21230	tantalum alloys and other metals.....	48
welcome aboard, general information.....	15364	protection of reinforcing steel.....	14207
Coast Guard Academy, New London:		protective coatings, decontamination, USSR study.....	20419
information for candidates.....	8176	solder flux leaves corrosion-resistant coating on metal.....	20564
information leaflet.....	8175	surface diffusion saturation of metals and coatings seminar, USSR.....	10785
Coast Guard Reserve, register of officers.....	8174	tungsten, preparation of thick coatings.....	13130
Coast Guard stations:		see also Ceramics.	
construction of shore and offshore establishments, appropriation authorization—		Coats, Robert R., geology of Jarbridge quadrangle, Nev.-Idaho.....	4775
hearings.....	6368, 6501	Coaxial cables, see Electric cables.	
law.....	8220	Cobalt:	
reports.....	6273, 6278, 6298, 6466	alloys, high-temperature strength, etc., in vacuum.....	9555
Coast Guard vessels, see Ships.		alloys, nickel-cobalt, electrochemical recovery from superalloy scrap.....	13121
Coast pilots:		content in some soils in European part of USSR.....	18343
manual.....	15363	mineral industry survey, monthly, minerals yearbook chapter.....	3334, 18661
United States coast pilot.....	1850, 17151	substituting for nickel, effects on tensile properties and hardness of stainless steel.....	11333
supplements.....	4405-4406, 6105-6108, 8171	Cobalt isotopes:	
Coast Range batholith, western margin, copper-zinc deposits.....	18101	Co-60, Albany facility, high-level gamma ray dosimetry.....	14747
Coast Ranges, northern California, stream hydrology related to optimum discharge for king salmon spawning.....	14357	Co-60, scattered radiation source in brick structure.....	15236
Coastal Engineering Research Board, establish, law.....	252	gamma ray and proton irradiation of seed, influence of cysteine on damage, USSR study.....	2515
Coastal Engineering Research Center: establish, law.....	252	Cobban, William A.:	
miscellaneous papers.....	12336-12338	late Cretaceous cephalopod Haresteras Reeside and its possible origin.....	8770
summary of capabilities, mission of research, etc.....	12338	multinodose scaphitid cephalopods from lower part of Pierre shale, etc.....	18138
technical memorandums.....	6587, 12339-12342	Coecidiosis, intestinal, of chickens, control, etc.....	11765
Coastal Plain, see Atlantic States.		Cochiti Reservoir:	
Coastal warning facilities charts:		make water available for pool recreation—	
Canadian border to Eureka, Calif. and Alaska.....	5755, 11685	law.....	8232
Cape Hatteras, N.C. to Brunswick, Ga.....	13520	reports.....	6331
Eastern Florida.....	5756	Cochran, Roger W., scattered radiation from cobalt-60 source in brick structure.....	15236
Eastport, Maine to Montauk Point, N.Y.....	13521	Cochran County, Tex., soil survey report.....	15092
Eureka to Point Conception, Calif.....	11686	Coeke County, Tenn.:	
Hawaiian Islands.....	5757, 11687	transfer national forest lands for Foothills Parkway—	
Manassquan, N.J. to Cape Hatteras, N.C. and Chesapeake Bay.....	13522	law.....	17274
Montauk Point, N.Y., to Manassquan, N.J.....	13523	reports.....	503, 15516
Morgan City, La. to Apalachicola, Fla.....	9879	Cockrell, Capers R., computations for large, uniform circular arrays with typical element patterns.....	21753
Point Conception, Calif. to Mexican border.....	13524	Cockroaches, how to control them.....	16956
Puerto Rico and Virgin Islands.....	13525	Cocks, Charles A., minutes, 131st meeting of Missouri Basin Inter-Agency Committee.....	3000
Coasts facilities, Navy design manual, changes.....	3201, 20893		
Coates, John B., Jr.:			
preventive medicine in World War II communicable diseases, arthropodborne diseases other than malaria.....	17056		
surgery in World War II, activities of surgical consultants.....	10022		
Coating and Chemical Laboratory report.....	9686		
Coating materials:			
coatings for concrete.....	14208		
fluidized-bed coatings with plastics.....	6551		

# JANUARY-DECEMBER

	Entry		Entry
	Code of Federal regulations-----	2325,	Coffman, Franklin A., inheritance of
	3335, 4710-13, 6644-83, 8554-78,		morphologic characters in
	10529-5339, 12397-401, 14255,		Avena-----
	21310.		16974
	Index, 1964-----	12397	Cogan, Edward, separation and deter-
	publication techniques, improve,		mination of rare earth metals
	law-----	270	in zirconium-rare earth al-
	see also for titles, chapters, etc., of		loys-----
	the code printed separately,		11336
	subject involved.		Cohen, Daniel M., ophidioid fish genus
	Codes:		Oligopus from West Africa-----
	Bose-Chaudhuri error-correcting		20636
	codes, application-----	18858	Cohen, H. J., permselective mem-
	coding of work meanings according		branes, test manual-----
	to symbols of objects expressed		8798
	by them-----	8914	Cohen, Ira, non-destructive measure-
	constructive optimal coding meth-		ment of U-235 retained in ab-
	ods for noisy channels, USSR		solute air filters-----
	study-----	9363	13704
	radiosonde, manual-----	3188	Cohen, M., planetary physics, expan-
	see also headings beginning Code--		sion method for calculating
	also subjects.		atomic properties transition
	Codes of law:		probabilities-----
	citations, how to find, pamphlet---	6365	16655
	District of Columbia, amend, re-		Cohen, Philip:
	port-----	15567	hydrogeologic investigations in val-
	District of Columbia, 1961 edition,		ley of Humboldt River near
	supp-----	8389	Winnemucca, Nev-----
	United States-----		15963
	1958 edition, cumulative supp.--	11986,	hydrogeology and hydrogeochemis-
	13838, 15379, 17167		try of Truckee Meadows area,
	revision and codification-----		Washoe County, Nev-----
	résumé of activities-----	8410	18151
	study, expenses, report-----	4561, 17814	Cohen, Wilbur H., poverty in United
	see also, in main alphabet, sub-		States-----
	jects.		8788
	United States Code, title 38, com-		Cohen, Wilbur J.:
	pilation-----	21215	new approaches to mental retarda-
	see also subjects.		tion and mental illness-----
	Coefficients:		18155
	accumulation data of radioactive		1963, year of legislative achieve-
	isotopes in marine organisms,		ments in education-----
	USSR study-----	10847	6831
	base pressure, obtained from X-15		Coherent radiation, see Radiation.
	airplane for Mach numbers up		Coins:
	to 6-----	18752	coin shortage, hearings-----
	coefficients and resistivity, Seebeck,		17648
	system for measuring-----	20711	domestic, manufactured by U.S.
	friction and wear property of wire		minis-----
	brush skids constructed with		21723
	René 41 bristles-----	19134	retention of 1964--
	heat transfer, film boiling, obtained		hearings-----
	with hydrogen, nitrogen and		15803
	freon 113 in forced flow, cor-		law-----
	relation study-----	13230	17438
	in-pile Hall, conductivity measure-		reports-----
	ments on zone-refined P-type		13535, 15697,
	silicon-----	5591	see also Half dollar--Silver
	infrared radiation, and differences		(money).
	in parameter $\gamma = (kpc) - \frac{1}{2}$ for		Coke:
	seas and continents on moon's		ASTM and Micum test methods,
	surface, USSR study-----	20050	correlation-----
	tables of X-coefficients and A fac-		16633
	tors for triple angular correla-		mineral industry survey, monthly--
	tion analysis-----	18780	3336
	Coeur d'Alene district, Idaho:		minerals yearbook chapter-----
	bleached rock-----	15948	21686
	economic aspects of silver produc-		produced by BM-AGA industrial
	tion-----	5476	methods, comparison of prop-
	ore deposits, Shoshone County----	15948	erties-----
	Coffee:		7435
	foreign agriculture circulars-----	3520	see also Coal.
	international agreement, 1962----	9816	Colandro, Marie R., relief-----
	international agreement act of		12040, 15461
	1964--		Colby, Bruce R.:
	hearings-----	6505	discharge of sands and mean-veloc-
	reports-----	6490, 17581	ity relationships in sand-bed
	soluble and instant, provide duty-		streams-----
	free importation-----		18136
	law-----	13886	scour and fill in sand-bed streams--
	reports-----	8309, 12233	6808
	Coffin, Frank M., remarks, Sept. 11,		Cold:
	1963-----	4869	exposure--
			cell proliferation in adrenal of
			rats-----
			4247
			effect of low temperature on iso-
			lated hearts of Citellus leu-
			curus and C. Mohavensis-----
			4245
			effect on action of morphine in
			rats and mice-----
			7980
			effect on blood clearance of car-
			bon and bacteria in mice-----
			4244
			effect on resistance to Ehrlich
			ascites tumor-----
			7982
			effect on some aspects of protein
			metabolism-----
			4251
			Kalahari Bushmen at night, ther-
			mal and metabolic response-----
			4243
			metabolic studies of amino acid
			imbalance in rats-----
			4249
			mouse, effect on formed elements
			of peripheral blood-----
			19143
			heat and cold effects, control-----
			11569
			relationship upon biological prop-
			erties peculiar to influenza virus,
			etc-----
			4252



# INDEX 1964

Entry	Entry
Cold Regions Research and Engineering Laboratory: research reports..... 8507-10, 10485-486, 12343-346, 14202-203, 15865, 17937, 19640-651, 21277.	College, Alaska, research and field laboratory for water pollution control..... 11573
science and engineering, physical science..... 19653, 21278	College Magnetic Observatory, magnetograms and hourly values..... 6104, 17149
technical reports..... 6588, 8511-16, 10487, 15866, 17938-941, 19652.	College students, <i>see</i> Students.
Cold storage: regional holdings, summary, 1963... 9846	Colleges and universities: A.I.D. and universities, strengthening partnership..... 12561
report (periodical)..... 3337	administrative and faculty salaries, changes from 1960-61 to 1962-63..... 573
Cold war, <i>see</i> International relations.	alcohol education in institutions of higher learning..... 13280
Cole, Allen E.: horizontal and vertical distributions of atmospheric density, up to 90 km..... 19139	campuses, new construction and rehabilitation, 1961-62..... 4630
supplemental atmospheres..... 7979	classroom facilities planning aids... 14178
Cole, Elizabeth R., public education, 1963 staff report..... 11931	clearinghouse of studies on higher education, reporter..... 598
Cole, William A., soil survey, Jackson County, Miss..... 15093	Communist China, popularization of higher education..... 2277
Coleoptera, <i>see</i> Beetles.	correspondence or directed home study, information..... 10460
Coles, Harry L., civil affairs, soldiers become governors..... 9493	curricula in oceanography 1963-64... 8538
Coll group, <i>see</i> Colliform organisms.	debate topics, preparation and printing of compilations of materials— law..... 4420
Colliform organisms, membrane system in E. coli cells, USSR study..... 20255	reports..... 2102, 2200
Colket, Meredith B., jr., guide to genealogical records in National Archives..... 14931	degrees conferred, 1962-63, summary..... 17926
Collagen, synthesis by fibroblasts during connective tissue growth, USSR study..... 16345	District of Columbia public higher education, recommendations of President's Committee..... 16821
Collar crack of birch..... 21328	directory, higher education, 1962-63, supplement..... 2270
Collards, caterpillar control in South..... 9939	directory, higher education 1963-64..... 8480
Collbran project, Bonham and Cottonwood pipelines and Molina power plants, design and construction, technical report..... 21862	duty-free entry of certain articles..... 8310, 14049, 17230, 17580
Collecting of accounts: erroneous payments to civilian and military personnel, waiver, report..... 15509	earned degrees awarded 1961-62, comparison with projections to 2000..... 7618
judgment collection practices and policies of Justice Department— hearing..... 15587	earned degrees by field of study and level projected to 1975..... 14181
report..... 15531	education explosion, commencement exercises, Wisconsin State College (address)..... 13376
retail credit and collections, bibliography..... 20786	Education Office publications on higher education, 1963, bibliography..... 8495
Collective bargaining: Alaska RR and its employees, encouragement— hearing..... 407	engineering, enrollments and degrees..... 8478
report..... 2057	engineering technology programs, ECDP accredited, 1963..... 4619
collective bargaining and technological change, recent approaches to problems..... 13046	enrollment and facilities survey, 1961-65..... 10459
collective bargaining and war against poverty (address)..... 7591	enrollment, fall, 1963..... 591
consequences of NLRB action on good faith bargaining (speech)..... 13291	enrollment in higher education, 1st term 1961-62 and summer sessions 1961..... 19626
facts, figures and comments in South (address)..... 7594	enrollment, resident and extension, fall 1963..... 21272
health benefit plans..... 7739	facilities, financial assistance for construction, regulations..... 19629
responsible unionism and constructive collective bargaining, reconcile economic might and human right (remarks)..... 11245	facilities, survey..... 10459
statistics for use in collective bargaining (remarks)..... 5452	faculty and other professional staff, 1959-60, summary report..... 608
Collectives: Leninist principle of collectivism, restoration, etc., in party leadership, 1953-63, USSR study..... 19994	faculty and other professional staff, 1963-64..... 12327
Rakhva Vyit kolkhoz, Estonian SSR production increased through use of fertilizers..... 8885	faculty members, changes in number in same 1058 institutions of higher education, by rank and length of contract, 1960-61 and 1962-63..... 17911
USSR, credit for bankrupt kolkhozes? Germany study..... 8875	faculty salaries, 1963-64, preliminary report..... 2278
	federally financed student loans, fellowships, career training programs in higher education, directory..... 4493
	finance series..... 573, 10458, 10475, 14185, 14195, 17911
	financing graduate education..... 14184

	Entry
Colleges and universities—Continued	
financing higher education .....	14185
fitness for leadership .....	18881
foreign institutions of higher education, decree on acceptance of diplomas issued, Hungary .....	7251
graduation, median age, 1960 and 1950 .....	1820
grants, professional nurse education program, hearings .....	10325
guide to prospective students from other countries .....	10469
higher education (periodical) .....	3572
higher education facilities act, law .....	1933
higher education instruction in agriculture, programs, activities, developments .....	12323
improving quality of education available to students, whatever their race (remarks) .....	16820
institutions granting bachelor's or higher degrees in home economics .....	4623, 17015
liberal arts colleges, academic administration .....	4616
library building needs .....	6829
library statistics, 1962-63 .....	4625
medical education facilities, planning considerations and architectural guide .....	13403
Midwest Regional Water Pollution Control Laboratory, cooperation between Federal government and midwest colleges, guidelines .....	9724
national defense education act of 1958—	
extend and amend—	
hearings .....	17646
law .....	21157
reports .....	15536, 15732, 17575, 19483
institutes, counseling and guidance training—	
announcement .....	4628
program, policies and procedures manual .....	14191
institutes for teachers of English, etc., preparing proposals, manual .....	21267
NDEA and higher education (periodical) .....	3782
NDEA language and area centers program in nonwestern language .....	19633
nuclear education, interrelated role of universities and Federal agencies, conference proceedings .....	11867
personal and family characteristics of persons enrolled, etc. ....	8140
physical facilities series .....	4630, 14178, 14196
Poland, admissions rules, student activities, and curriculums in higher education .....	14187
radiological health, curriculums and fellowships .....	18923
residence and migration of college students, fall, 1963 .....	21271
Rumania, higher education—	
current problems .....	8951
health field .....	16080
rich content of ideas .....	5358
salaries and student charges, 1963-64 .....	14195
scholarships established for American Indian youth .....	2440
science facilities planning aids .....	14196
State land-grant, Extension Service review (periodical) .....	3450
State legislation, survey, 1963 .....	4650

	Entry
Colleges and universities—Continued	
student assistance act of 1964—	
hearings .....	14151
report .....	17804
students enrolled for advanced degrees, fall 1962, summary, report .....	609
students, junior-year science, mathematics, and foreign language, survey, 1962 .....	10467
summer sessions, 1960 .....	4649
teacher preparation, 5 targets for next 10 years .....	8496
teaching about United Nations in United States, 1960-63, report .....	14199
teaching faculty 1962-63, primary teaching areas and contract salaries .....	6575
trends in graduate enrollment and Ph.D. output in scientific fields at 100 leading institutions, 1961-62 and 1962-63 .....	20651
tuition, etc., charges to undergraduates—	
denominational institutions, 1962-63 .....	10475
1958-63 .....	10458
USSR—	
higher education .....	583
higher educational institutions, chemical science .....	16210
higher educational institutions news—	
instrument building series .....	2847, 5178, 5347
radio engineering series .....	2500, 7021, 7308, 9209
radiophysics series .....	1123, 5236, 7212, 8863
Novosibirsk State University, Russian SFSR, translation of pamphlet .....	5003
selections from Vestnik vyssheshkoly .....	4987
see also Junior colleges—	
land-grant colleges .....	
Collier, Charles R., influences of strip mining on hydrologic environment of parts of Beaver Creek basin, Ky. 1955-59 .....	10643
Collimators, attachment converts microscope to point source autocollimator .....	14829
Collin County, Tex., hydrologic studies of watersheds, Honey Creek basin, 1953-59 .....	15967
Collins, A. Gene, oilfield waters, methods of analyzing selenium and tellurium .....	14756
Collins, F. H., coordinate transformation .....	3083
Collins, G. D., fabrication cost estimate for UO <sub>2</sub> and mixed PuO <sub>2</sub> -UO <sub>2</sub> fuel .....	8053
Collins, George J.:	
national inventory of school facilities and personnel, spring 1962 .....	6372
schoolhousing in 1963, USOE survey begins next month .....	602
Collins, J. F., address, June 4, 1964 .....	11880
Collins, Leroy:	
addresses, etc.—	
July 27, 1964 .....	15377
Aug. 7, 1964 .....	15376
Aug. 18, 1964 .....	17166
Oct. 11, 1964 .....	19367
Oct. 19, 1964 .....	21100
nomination, hearing .....	14182
Collins, Theodore C., market for semiconductor devices in West Germany and Italy .....	13740

# INDEX 1964

Entry	Entry
Collins, William E.:	Colorado—Continued
caloric nystagmus of cat following rotary habituation.....	siliceous ores, solvent extraction recovery of thorium and yttrium.....
4315	13133
Civil Aeromedical Research Institute, bibliography of recently translated material.....	tellurium resources.....
139	5493
nystagmus responses of cat to rotation, etc.....	water supply outlook and special snow report.....
1790	13460
task, control of arousal and effects of repeated unidirectional angular acceleration on human vestibular responses.....	water supply outlook, early season snow report.....
13731	3141
Collins, William F., testimony, hearings.....	western, hydrologic and biotic characteristics of grazed and ungrazed watersheds, Badger Wash Basin.....
6526	4804
Colloids, metallic, field emission charging.....	women workers, 1960.....
5516	1664
Colombia:	zinc deposits, oxidized.....
agricultural commodities, agreement.....	21349
1621, 9833	Colorado National Monument, general information.....
economy, basic data.....	11461
10700	Colorado River and Valley:
foreign trade regulations.....	flood control works, joint construction, etc., with Mexico, conclusion of agreements—
6857	hearings.....
market for U.S. products, international commerce, supplement.....	14000
10690	law.....
radio communications between amateur stations on behalf of 3d parties, agreement.....	17270
7777	reports.....
weather stations, cooperative meteorological program, continuation, agreement.....	13966, 15709
18968	hydroelectric projects below Glen Canyon Dam, preserve jurisdiction of Congress over construction—
Colombo, Annunziata, relief.....	hearings.....
452, 1904	12271, 14009
Colonie Town, N.Y., population, special census.....	law.....
13766	17350
Colonies:	reports.....
apologists of neocolonialism, Communist Chinese views.....	10407, 13975, 17543
1086	increasing precipitation in basin by artificial means, hearing.....
British policy, Soviets criticize, Lancaster House is arena of hypocrisy.....	14146
16564	lower basin, summary of snow survey measurements, 1938-64.....
Color:	18955
color vision, USSR studies.....	Lower Colorado River land use plan.....
14525	14364
discrimination, effect of spectral bandwidth.....	Mexico, delivery of water to, special studies.....
5468	15077
electrical insulation, limits for, military standard.....	snow survey measurements, 1919-63.....
10449	15090
filtering, visual display enhancement and techniques of target detection, study.....	storage project—
9980	general information.....
induced, factor affecting perception.....	9741
5464	San Juan-Chama unit, make water available for pool for recreation at Cochiti Reservoir—
removal from surface waters by hypochlorite.....	law.....
20956	8239
signal lights, United States standard for colors.....	report.....
18803	6331
Color photography, camera filters, selection.....	Savery-Pot Hook, Bostwick Park and Fruitland Mesa reclamation projects construction—
14934	hearings.....
Color television, see Television.	6360, 12137
Colorado:	law.....
annual survey of manufactures, 1962, standard metropolitan areas and large industrial counties.....	17426
6032	reports.....
climate summary, 1951-60, decennial census.....	15493, 17797
19016	upper basin storage project, etc., report 1963.....
climateological data.....	10354
3329	print as Senate document, report.....
Costilla compact, amendment—	8426
law.....	6811, 15961
1927	upper, water resources, basic data.....
report.....	19786
492	water supply outlook and snow surveys of—
electric rate book.....	drainage basins.....
10525	4138
forest area and timber volume.....	lower basin.....
6745	4137
Front Range, geology of uranium deposits.....	watershed conditions affecting water supply.....
18106	3639
labor organizations, reporting, register.....	see also Lower Colorado River Basin project.
16573	Colorado River Indian Tribes, see Colorado River Reservation.
lodgepole pine, volume tables and point-sampling factors.....	Colorado River Reservation:
12481	fixing beneficial ownership—
mineral industry, minerals yearbook chapter.....	law.....
1408	10145
municipal waste facilities, 1962 inventory.....	report.....
3108	8331
municipal water facilities.....	Colorimetry, fluorescent color specification by means of Beckman model DK-2 spectrophotometer.....
18913	5593
natural resources.....	Colors, see Color.
2441	
precipitation data, hourly.....	
3578	
public school finance program, 1962-63.....	
593	

# JANUARY-DECEMBER

	Entry
Columbia Basin project:	
Banks Lake and Potholes Reservoir project, recreational costs to be nonreimbursable—	
hearing -----	10424
report -----	6488
Columbia Plaza project:	
terminate, report -----	12113
urban renewal in D.C., hearings--	6349
Columbia River and Valley:	
fish passage reports--	
Bonneville, The Dalles, McNary and Ice Harbor Dams-----	613, 17936
Rock Island Dam, 1962-----	21319
flood season flow near the Dalles--	4058
geology and ground-water conditions of Clark County, Wash., with description of major alluvial aquifer along Columbia River -----	12517
lower basin--	
floods, magnitude and frequency--	4818
surface water quality-----	6811
surface water records, Oct. 1950-Sept. 1960-----	4822
lower, radiological survey, Jan. 1962-July 1963-----	21855
monthly mean discharge at gaging stations and change of storage in lakes, etc-----	4058
snow survey and soil measurements for drainage in Canada-----	15089
snow survey measurements, 1919-63-----	15090
storage in major power reservoirs, monthly report-----	4058
upper basin--	
floods, magnitude and frequency--	10658
surface water records, Oct. 1950-Sept. 1960-----	14354
water resources, cooperative development, treaty and related agreements with Canada-----	21881
water supply and water quality management in basin-----	11552
water supply outlook and snow surveys -----	4145
Columbium, <i>see</i> Niobium.	
Columbium carbide, <i>see</i> Niobium carbide.	
Columbus, Christopher, light, landfall, and landing, new theory identifying locale-----	20794
Columbus, Ohio, occupational wage survey -----	7414
Columbus Bond project, construct, operate and maintain hearings -----	15590
Columbus Day:	
make legal holiday--	
hearing -----	19515
report -----	17757
Columns, wood, short and intermediate lengths, experimental and analytical methods for evaluating strength-----	12448
Colville Reservation:	
Confederated Tribes--	
Federal supervision over property and affairs, termination--	
hearings -----	6512
report -----	17763
judgment funds, disposition, hearings -----	6512
per capita distribution from funds--	
law -----	17409
reports -----	2188, 17578
Comar, Cyril L. fallout from nuclear tests-----	1787
Combat:	
performance of enlisted men with disciplinary records-----	21006
readiness -----	21001

	Entry
Combat areas, military roads and airfields, soil stabilization requirements -----	2299
Combat ships, <i>see</i> Warships.	
Combs, Jerry W., jr., demographic changes in Eastern Europe---	2115
Combustible liquids, <i>see</i> Liquids.	
Combustion:	
cyanogen-oxygen, composition and thermodynamic properties of products -----	18753
gasdynamics, USSR study-----	21779
human waste and product recovery--	7986
in situ project, Allen, Anderson, and Wilson Counties, Kans., 1964-----	20480
resonant, applications of jet break-up by shock waves-----	18754
supersonic streams, optical techniques for temperature and concentration measurements--	18769
Combustion Engineering, Inc., overpayments of nuclear submarine components, GAO report-----	6774
Combustion gases, <i>see</i> Gases.	
Combustors, rocket, effect on performance of interchanging propellants with coaxial injection-----	7536
Comella, Lawrence J., basic data on economy of British Virgin Islands -----	21084
Comer, Elden R., relief-----	6233
Comets, astrophysics study-----	14772
Comfort, Elizabeth, nuclear radiation guide -----	9967
Command (military):	
field command procedures, maintenance management-----	13683
your command information program, DA pamphlet-----	17044
Command signals, <i>see</i> Signals.	
Commemorative coins, <i>see</i> Half dollar.	
Commemorative medals, <i>see</i> Medals.	
Commemorative stamps, <i>see</i> Postage stamps.	
Commerce:	
agricultural export trade, prospects and problems (remarks)-----	7908
agricultural trade development and assistance act of 1954, Library of Congress project newsletter--	3679
challenge of international trade (address)-----	11968
changing political and economic climate in world trade (remarks)-----	13830
Communist China's trade, translations -----	914,
939, 986, 1110, 1185, 1222,	
2575, 2613, 2722, 2794, 2838,	
2927, 4934, 4957, 4991, 5061,	
5241, 5262, 6352, 5391, 6946,	
6988, 7050, 7312, 7029, 7105,	
8944, 9142, 10906, 12602, 12659,	
12744, 12826, 13019, 14531,	
14548, 14641, 16061, 16131,	
16214, 16287, 16476, 16555,	
18396, 18426, 18448, 18599,	
19856, 19995, 20338, 20401,	
21475, 21520.	
Communist economic warfare, consultation by Un-American Activities Committee with Robert Loring Allen, print additional copies, report-----	17566
domestic oceanborne and Great Lakes, 1962, summary 1953-62 -----	7424
domestic, vessel construction program to aid domestic trades, hearings -----	19594



# INDEX 1964

	Entry
Commerce—Continued	
East-West trade—	
Battle act, report—	3144
expansion and U.S. participation	
(remarks)-----	13828
hearings-----	10419
views of businessmen, bankers,	
and academic experts, compilation,	
print additional copies, report	19573
European Economic Community—	
EBC, Great Britain, and U.S.,	
comparative wage costs and	
trade advantage-----	10305
private trade barriers, description	
and analysis-----	10150
expanded trade and commerce for	
our country (remarks)-----	6639
external trade, economic effective-	
ness, USSR study-----	21479
foreign agricultural trade by com-	
modities-----	
calendar year 1963-----	14176
fiscal year 1962-63-----	6559
foreign agricultural trade by coun-	
tries-----	
calendar year 1962-----	569
calendar year 1963-----	19624
fiscal year 1962-63-----	10457
foreign agricultural trade,	
monthly-----	3518
foreign commerce of U.S., quarterly	
summary-----	3958
foreign market potential for U.S.	
coal-----	219
correction sheet-----	4401
foreign trade—	
areas, code classification and def-	
initions-----	6050
changes in presentation of im-	
port statistics-----	11910
code of Federal regulations-----	10530
Czechoslovakia, 1948-62-----	6859
East European, translations-----	960
1104, 1272, 2569, 2654, 2678,	
2718, 2903, 4925, 4972, 5186,	
5258, 5362, 6935, 7027, 7228,	
7233, 7292, 9067, 9118, 9305,	
9365, 11070, 11092, 11144, 11178,	
11241, 12626, 12672, 12694,	
12789, 12823, 12920, 14415,	
14540, 16000, 16097, 16123,	
16228, 16317, 16358, 16390,	
16424, 18246, 18413, 18501,	
18587, 19877, 19924, 20207,	
20253, 20276, 20348, 20360,	
21514, 21528,-----	3526-35,
FT reports-----	4110, 4113-22, 13768
has helped port of San Diego,	
Calif. (remarks)-----	21298
importance for U.S. economic	
growth (address)-----	8182
importance to American business	
(remarks)-----	11969
meeting challenge of trade (ad-	
dress)-----	15372
policy (address)-----	6120
reports prepared by Foreign Ser-	
vice, available to business, list	4868
sell your products through U.S.	
trade missions overseas-----	869, 19825
small business participation, re-	
port-----	8330
statistics, country designation,	
code classification-----	4353
change-----	8109
trade and aid in a troubled	
world (remarks)-----	1724
United States-----	2458, 4862, 8829,
10705, 14390, 18186, 21076	
United States, lending commodi-	
ties in 1963-----	14389

	Entry
Commerce—Continued	
foreign trade—continued	
United States oceanborne, con-	
tribution of Federal aid pro-	
grams, 1959-62-----	16620
with European Economic Com-	
munity-----	18178
foreign trade regulations—	
Argentina-----	14380
Australia-----	867
Austria-----	14381
Belgium-----	8830
Bolivia-----	4858
Brazil-----	6844
Cameroon-----	21073
Central African Republic-----	21073
Ceylon-----	21090
Chad-----	21073
Chile-----	10692
Colombia-----	6857
Congo (Brazzaville)-----	21073
Congo (Leopoldville)-----	15985
Costa Rica-----	6848
Ecuador-----	8832
Equatorial Customs Union-----	21073
Germany, Federal Republic-----	14379
Gabon-----	21073
Ghana-----	2457
Greece-----	15986
Guatemala-----	14374
Haiti-----	2454
Honduras-----	8828
Hong Kong-----	18174
Iceland-----	21081
Indonesia-----	12552
Ireland-----	14386
Israel-----	8833
Jordan-----	21089
Korea, Republic-----	10693
Liberia-----	18185
Luxembourg-----	8830
Malagasy Republic-----	2462
Mexico-----	8831
Netherlands-----	10696
New Zealand-----	6858
Nicaragua-----	14384
Nigeria-----	862
Paraguay-----	4855
Peru-----	21074
Philippines-----	2460
South Africa, Republic of-----	18187
Spain-----	14375
Taiwan-----	18184
Thailand-----	14378
Turkey-----	14376
United Arab Republic-----	4854
United Kingdom-----	8821
Uruguay-----	4853
Venezuela-----	18170
Viet-Nam-----	12556
West African Customs Union	
(Dahomey, Ivory Coast, Mali,	
Mauritania, Niger, Senegal, Up-	
per Volta), and Togo-----	14383
international agricultural trade ex-	
pansion, importance to U.S.	
(speech)-----	7945
international, Austria, market for	
supermarket, food processing,	
and food handling equipment-----	12560
international commerce, weekly-----	3605
index, quarterly-----	4848
supplements-----	4865-66,
6861, 10690, 10707, 12557-559,	
14370,-----	
international meetings, world list-----	4168
international, Nigeria, market for	
U.S. products-----	6843
interstate—	
establishment of fair labor stand-	
ards in employments-----	7837
mail-order firearms in interstate	
traffic, hearings-----	539

	Entry
Commerce—Continued	
Interstate—continued	
mail-order firearms, juvenile delinquency investigation, report	21231
mail order land sales, hearings	19586, 21237
publications, price list	20737
State taxation of activities, investigation—	
expenses, report	12070
extend time for filing reports—	
law	8225
reports	6296, 6486
steel containers labelling—	
hearing	4501
reports	13983, 15545
Interstate commerce act, amend—	
hearings	10413, 21207-208
reports	12225, 15677
Interstate commerce acts annotated, advance bulletins	3213
maritime resources for security and trade	10333
new era in foreign trade (remarks)	11775
Oakland, artery of world commerce (remarks)	21300
one world, one market (address)	11971
problems relating to finances of Soviet trade	12882
profits and power through trade (speech)	21094
publications, price list	7684
relating national agricultural policies to expanding trade (address)	5805
Socialist countries and world trade	19929
stimulating export expansion (address)	4409
trade expansion program, America's biggest selling job (addresses)	4409-11
trade, interim agreement with Iceland	18962
trade mission to—	
Australia	12557
Austria	4864
Germany	10707
Hong Kong	4865
Kenya, Tanganyika, Uganda	6861
Malaysia	4866
New Zealand	12558
Philippines	14391
Switzerland	4867
Venezuela	12559
trade missions overseas, questions and answers for prospective members	4863
United States trade and payments in 1963	10545
United States trade with—	
Cuba, 1960-63	10706
European Free Trade Association, 1950-63	21077
major world areas	2461, 12555, 21092
Puerto Rico and U.S. possessions, monthly report	3535
Sino-Soviet bloc, 1961-63	18181
waterborne—	
calendar year, 1962	626, 6597, 10494
calendar year, 1963	17958, 19681, 21281
foreign, 1962	15328
national summaries	627, 6597, 10494
world trade—	
at crossroads, Kennedy round of GATT negotiations	8022
looking ahead (remarks)	19087
with Cuba, 1961-62	10704
world traders, import, exchange permit rules	11970

	Entry
Commerce—Continued	
see also Exports—also names of countries and places—also names or classes of articles of commerce—also certain headings beginning Commercial.	
Commerce City, Colo., accident	14405
Commerce Committee, Senate:	
calendar	3665
hearings	527, 2235-36, 4576-77, 6499-6503, 8440-42, 10413-416, 12256-257, 14132, 15804, 17873-874, 19594-597.
Investigations and studies authorization, report	4555
reports—	
2204, 2206, 4523, 6464-66, 8417, 10367, 10403, 10406, 12205, 12216, 12218, 12223-225, 12228, 12244, 14051, 15640, 15677, 15703-705, 15712-713, 15753, 15744, 17712, 17719, 17749, 17758, 17787-788.	
Commerce Department:	
acceptance of gifts and bequests by Secretary of Commerce, authorize—	
law	19419
reports	10403, 17623
appropriations, 1964—	
hearings	516
law	1974
reports	511, 2082
appropriations, 1965—	
hearings	10289, 15791
law	17386
proposal	10245, 21193, 19533
reports	21233
cooperative offices, business information available (address)	17157
general information	11979
international affairs, press releases	6896
Maritime Evaluation Committee, final report	10333
press releases	3877
press releases and other informational material, uneconomical practices relating to distribution, GAO report	21341
publications, 1963 supplement	17164
report, 1962	10127
report, 1963	4411
reports prepared by Foreign Service, export information, list	4868
selling around the world, how Commerce helps	19364
services in helping our economy (remarks)	1857
staff report	6123
telephone directory	6125
Commercial artists, see Artists.	
Commercial banks, see Banks and banking—National banks.	
Commercial fisheries, see Fish and fisheries.	
Commercial Fisheries Bureau:	
Alaska's commercial fisheries, research and services	6702
Economics Branch, report on	6703
North Atlantic region, research and services	2336
report, 1962	14281
research vessel George B. Kelez, activation	4731
survey of fishery resources of U.S., authorize, report	17787
Technology Branch, publications, 1955-59, index	14277
Commercial law:	
other commercial transactions, code for D.C., enact—	
law	17368
reports	15485, 15764

# INDEX 1964

	Entry
Commercial law—Continued	
uniform commercial code for D.C., enact—	
hearing .....	8375
law .....	1972
report .....	475
Commercial policy, foreign govern- ments, trade policies affecting agriculture .....	5813
Commercial practices:	
code of Federal regulations .....	6663
unfair activities, civil remedies to persons damaged, provide hearings .....	17656
Commercial products:	
exports—	
airborne foreign trade reports ..	3533
foreign trade reports .....	3531-32, 3534
statistical classification, sched- ule B .....	4007, 13748, 13770
hot goods, written assurances of compliance under Fair labor standards act, general state- ment .....	16914
imports—	
airborne, foreign trade re- ports .....	3529-30
foreign trade reports .....	3526-27, 13768
changes in presentation of statistics .....	11910
statistical classification—	
schedule T .....	4354
schedule Y .....	4355, 10046
leading commodities in U.S. for- eign trade, 1963 .....	14389
manufactured products—	
alphabetic list, census of manu- factures, 1963 .....	4339
numerical list, census of manu- factures, 1963 .....	11911
manufacturers' export sales and orders of durable goods, sum- mary 1963 .....	8119
market for U.S. products in—	
Colombia .....	10690
Hong Kong .....	15982
Morocco .....	19823
Nigeria .....	6843
Venezuela .....	14370
new product development and sale, bibliography .....	5678
products list circular .....	3940
quality of consumer goods should be controlled, USSR article .....	21425
selected consumer goods, trade of United States, Western Euro- pe, Canada and Japan, 1961- 62 .....	14394
sell through U.S. trade missions overseas .....	869, 19825
trade in manufactured products, 1961-62, United States, West- ern Europe, Canada and Ja- pan .....	14392-394
United States share of world mar- kets for manufactured prod- ucts, analysis of changes from, 1954-61 .....	14395
USSR consumer goods and domestic trade, translations .....	994,
2703, 2900, 2930, 7124, 7270, 9210, 9279, 10731, 10863, 11028, 11054, 12882, 12948, 14651, 16248, 18356, 18411, 19945, 20010, 20172, 20190, 20326, 21488.	
USSR, retail commodity turnover, principles of planning .....	16200
Commercial standards, see Standards and standardization.	
Commercial treaties:	
establishment, treaty with Belgium ..	1605

	Entry
Commercial treaties—Continued	
Senegal, laws and decrees governing trade agreements .....	2534
trade agreement with—	
Iceland .....	1607
Venezuela .....	7789
trade agreements—	
and adjustment assistance pro- grams, code of Federal regula- tions .....	4710
escape clause investigations, re- port .....	5718
program, operations, July 1960- June 1962 .....	18992
program operations, report .....	21166
trade expansion act of 1962— effect on small business, report ..	8330
Tariff Commission report, clinical thermometers .....	11653
Commissaries:	
military, failure to curtail opera- tion where adequate commer- cial facilities are available, GAO report .....	10627
stores, meat market operations, Army technical manual, changes .....	10014, 19218
Commissary stores, see Commissaries.	
Commissary men, 1 & C, Navy train- ing course .....	16788
Commission for Educational Exchange between United States and Ecuador, agreement .....	1610
Commission for Educational Exchange between United States and Federal Republic of Germany, agreement .....	9820
Commission for Educational Exchange between United States and Iran, agreement .....	1622
Commission for Educational Ex- change between United States and Portugal, agreement .....	9838
Commission for Educational Ex- change between United States and Tunisia, agreement .....	7786
Commission on Disposition of Alca- traz Island, see Alcatraz Is- land, *Commission on Disposi- tion of.	
Commissioned officers, see Coast and Geodetic Survey—Coast Guard Reserve—Public Health Ser- vice.	
Commissioner of Railroads, records, preliminary inventory .....	5538
Commissioners, Court of Claims, in- crease, report .....	2090
see also United States commis- sioners.	
Commissioners of District of Colum- bia, see District of Columbia.	
Commissions, see names of commis- sions.	
Committee on Water Resources Re- search, see Water Resources Research Committee.	
Committee reporter .....	7677
Committees:	
citizens, for better schools .....	17912
county ASC, stabilize and improve system—	
law .....	17393
reports .....	17523, 17769
State migratory labor, directory ..	2948
Commodities, see Agricultural prod- ucts—Commercial products— Exports—Imports.	
Commodity Credit Corporation:	
audit, 1962, GAO report .....	4753
audit report, 1962 .....	10164
audit report, 1963 .....	19442
cotton export financing .....	14280

# JANUARY-DECEMBER

	Entry
Commodity Credit Corporation—Con.	
cotton price-support program, opportunity for reducing Federal expenditures and effecting savings by deterring movement of cotton over long distances prior to its placement under price-support loan, GAO report	19760
financial condition and operations—	3967
operations, June 30, 1963, graphic summary chart	6126
purchase of processed grain food products for domestic and foreign purposes, permit—	
law	17408
reports	17764
report, 1963	13832
sale of feed for maintenance of foundation herds, penalties for misuse, law	19393
sales list, monthly	3307
understatement of claims against United Arab Republic and Yugoslavia for recovery of excessive ocean transportation costs, GAO report	8733
Commodity Exchange Authority, appropriations, 1963, Agriculture Dept., hearings	10286
Commodity exchanges:	
code of Federal regulations	10531
commodity futures statistics, July 1962-June 1963	41
Irish potato futures trading, prohibit, report	8411
New York Coffee and Sugar Exchange, futures trading	10301
Commodity list, Army Mobility Equipment Center	11834
Common market, see European Economic Community.	
Common shipping faults and their remedies	1635
Commonwealth Edison Co. of Chicago, wage chronology, 1945-63	13042
Commonwealth Parliamentary Association, Senate observers attendance at meeting, reports	14102, 15687
Communes, USSR, communal livestock raising, growth	1057
Communicable Disease Center, amebiasis, laboratory diagnosis, self-instructional course	20739-742
Communicable diseases, see Contagion and contagious diseases.	
Communications:	
act of 1934, amend—	
hearings	2114, 10320, 10323, 10326, 17653
law	12001-2, 12008
reports	2080, 4483, 10225-227, 10267
act of 1934, suspend equal time provisions, report	12050
Army, troop topics	13675
carriers, discontinuance of service, FCC rules and regulations	3995
Coast Guard manual	8177
common carriers—	
and affiliates, reports, FCC rules and regulations	3995
connecting, filing of schedules, hearings	17653
miscellaneous rules, FCC rules and regulations	3995
new or revised changes, etc., hearings	17653
preservation of records, FCC rules and regulations	3995
regulatory authority of FCC, hearings	17653

	Entry
Communications—Continued	
Communist China, translations	914, 939, 980, 1110, 1185, 1222, 2575, 2613, 2722, 2794, 2838, 2927, 4934, 4957, 4991, 5001, 5241, 5262, 5352, 5391, 6946, 6988, 7029, 7050, 7105, 7312, 8944, 9142, 10906, 10902, 12659, 12744, 12826, 13019, 14531, 14548, 14641, 16316, 18397.
constructive optimal coding methods for noisy channels, USSR study	9363
contractions used by FAA in air traffic control, etc., handbook	4267
control center handbook	21286
cybernetics, USSR study	6963
deep space optical communications systems study	10652
discrete systems, elements, USSR study	16352
electronics doctrine, commercial services for Air Force, manual	5886
English language exercises for developing skills, USAFI book	10443
equipment—	
current industrial reports	3391, 17092
Federal item identification guides for supply cataloging	12293
supplement	3474
unnecessary costs due to inefficient and uneconomical supply and maintenance practices, 8th United States Army, Korea, Defense Dept., GAO report	10600
Federal regulation (statement)	2310
industry wage survey	5438
international, problems and techniques, hearings	4497
Journal of research, National Bureau of Standards	3631
modern theories	4360
Navy design manual, changes	3198
noise immunity of systems with error correcting feedback, USSR study	16531
noisy systems, single enhancement with instantaneously responding expansion amplifier	16994
PACAF basic bibliographies	1741
procedures, ATS handbook	13654
changes	15245, 20975
procedures, ATS manual	3345
changes	4266, 5919
retrometer, light-beam system, description	11362
satellite act of 1962, activities—	
report	6210
review, hearings	14002, 17650
satellites—	
bibliography	14799
Echo A-12, backing	16687
Europe and space, French study—	
experimental, intercontinental testing, agreement with Canada	9808
FCC rules and regulations	10516
general information	11348
intercontinental testing, agreement with Denmark, Norway and Sweden	1604
law, part of 3d National conference on peaceful uses of space, proceedings	13157
military-civil roles and relationships	19510
non-linear noise analysis in FDM telephony transmission	14892
Project Syncom, global network	1449
Syncom I, range and range rate system and data analysis	13217

Do not order from index; see indicated entry

Page 185



# INDEX 1964

	Entry		Entry
Communications—Continued		Communism—Continued	
services, Federal, Washington, D.C.		international developments, trans-	
area, additional costs resulting		lations—Continued	
from failure to consolidate by		12689, 12708, 12758, 12805,	
GSA, GAO report.....	12487	12862, 12943, 12953, 12997,	
space age regulation (address)...	15888	14425, 14443, 14482, 14494,	
space communications center, visit		14530, 14550, 14585, 14657,	
to, USSR.....	12854	16033, 16059, 16083, 16114,	
space communications, reentry		16151, 16162, 16179, 16254,	
voice system for use in con-		16304, 16336, 16354, 16389,	
junction with radar tracking		16456, 16478, 16518, 18205,	
equipment.....	16653	18253, 18322, 18361, 18485,	
statistics, common carriers, 1962...	4687	18522, 18563, 18589, 19878,	
systems, USSR studies.....	18572	19934, 19936, 19942, 19996,	
USSR equipment.....	16113	20079, 20111, 20170, 20245,	
USSR industry, new equipment,		20300, 20312, 20398, 20421,	
economic efficiency.....	2679	21390, 21438, 21459, 21476,	
USSR translations.....	1013,	21497, 21522, 21537, 21561,	
1096, 2542, 2843, 5013, 5225,		21635	
5255, 5350, 7220, 7264, 9255,		international, differences in world	
11119, 12622, 12717, 12912,		movement (speech).....	1283
13016, 14526, 16067, 16233,		international, U.S. policy toward...	5937
18435, 18514, 20085, 21463,		irrationality, consultation with	
21567.		Gerhart Niemeyer, print addi-	
see also Electric line—Military		tional copies, report.....	17567
communications—Telegraph.		Israeli leaders statements.....	5405
Communications coding clerks, cryp-		Italian Communist youth and inter-	
tographic, examination an-		national Communist conflict....	2808
ouncement.....	4387	Khrushchev's brand, and historical	
Communications Satellite Corpora-		lessons, Chinese comment.....	18314
tion:		Marxism and concrete sociological	
activities and accomplishments—		research, USSR study.....	2747
report.....	6210	Marxist-Leninist gnosiology and	
review, hearings.....	14002, 17650	problem of sign and meaning,	
Communism:		USSR study.....	5139
Arab parties, conference of Marxist		Marxist methods in Soviet scientific	
theoreticians.....	1052	research.....	11182
Castro's network in United States,		North Vietnam general's views on	
Fair Play for Cuba Committee,		morality.....	9021
hearing.....	538	Peking's provocative polemic	
Chinese and Russian Communists		against Moscow.....	9113
compete for foreign support,		problems.....	3937
staff conference.....	21241	problems of education and science	
Communist International, commem-		of psychology, USSR study....	1328
orating 45th anniversary.....	9350	pro-Castro propaganda activities in	
contemporary problems and objec-		U.S., hearings.....	416, 2127
tives of Marxist-Leninist phil-		propaganda, protect postal patrons,	
osophy, USSR study.....	20394	hearings.....	2118, 10340
Cuba, Latin America and commu-		scientific, principles and structure,	
nism (address).....	1598	USSR problems.....	4929
decline in Middle East.....	1758	social progress and philosophy,	
economic warfare, consultation by		USSR study.....	8879
Un-American Activities Com-		social science and Communism,	
mittee with Robert Loring		USSR book review.....	5140
Allen, print additional copies,		Soviet-Chinese dispute, class strug-	
report.....	17566	gle on world scale.....	2731
Feng Ting's Communist life philos-		standard translations of North	
ophy, review.....	20190	Korean terms, JPRS hand-	
fertilizers role in creating material-		book.....	18540
technical basis of Communism,		technical material base, cost indices	
USSR study.....	10757	of plan to increase efficiency,	
Hungary, Communist in workers'		USSR study.....	2748
paradise, consultation with		thoughts of Lenin's genius, USSR	
John Santo, print additional		study.....	8876
copies, report.....	17568	Turkey, present day, Turkish Com-	
Ideology and psychology, USSR		munist view.....	9240
study.....	998	United States' treatment in different	
International developments, trans-		countries (address).....	9806
lations.....	891,	USSR—	
943, 1019, 1033, 1067, 1086,		agricultural development, state-	
1095, 1115, 1130, 1140, 1198,		ments of N. S. Khrushchev....	16520
1219, 1263, 1298, 1313, 1321,		goals and achievements, challenge	
2468, 2539, 2565, 2591, 2630,		to U.S.....	1756
2796, 2808, 2850, 2936, 4926,		Indoctrination and medical train-	
4971, 4994, 5022, 5093, 5127,		ing of doctors.....	9196
5155, 5179, 5237, 5306, 5351,		translations from Kommunist....	1078,
5414, 6913, 6973, 7003, 7039,		1224, 2682, 4968, 5289, 7038,	
7090, 7134, 7188, 7235, 7306,		8902, 9105, 9356, 11024, 12591,	
7316, 8853, 8911, 8965, 8984,		13000, 16332, 19866, 20143,	
8987, 9038, 9071, 9137, 9181,		21439.	
9214, 9246, 9281, 9296, 9352,		world, achievements, challenge to	
10743, 10792, 10812, 10855,		U.S.....	1756
10879, 10927, 10956, 10987,		world communism, bibliography...	15608
11021, 11032, 11047, 11082,		print as Senate document, re-	
11096, 11129, 11149, 11168,		ports.....	8429, 15686
11218, 12383, 12607, 12640.			

# JANUARY-DECEMBER

try

05.  
97.  
94.  
57.  
14.  
54.  
89.  
05.  
85.  
78.  
96.  
45.  
21.  
76.  
61.

283  
937

567  
105

308

314

747

139

182

921

113  
937

28

27

140

929

79

140

31

140

48

76

140

06

20

56

96

18.

91.

13.

56

08

86

	Entry
Communism—Continued	
world movement, selective chronology, 1818-1957	8403, 17472
print as House documents, reports	17565, 17821
Communist bloc, see Soviet bloc.	
Communist China, see China.	
Communist economic warfare, print additional copies, report	17566
Communist Party of Austria, revisionism	2661
Communist Party of Bulgaria, party accountability and election meetings	2905
Communist Party of China:	
Central Committee, letters exchanged with CPSU	12885
comment on Khrushchev's Communism	18314
leadership and succession to Mao Tse-Tung, appraisal of tensions	9802
war and peace question, comment on open letter of CPSU	4971
Communist Party of Finland, conducts secret purge	12852
Communist Party of France:	
proposals on immigrant labor problem in France	11151
17th Congress, proceedings and comments, translations	16059
Communist Party of Indonesia:	
performance praised by Italian Communists	4906
2d plenum of Central Committee—resolutions	8956
speeches	8913
Communist Party of Israel, activities	5305, 20310
Communist Party of Italy:	
debates international Communist unity	11096
Gramsci Institute lecture series on morals and society, translation	21476
international Communist movement, surveys	1033
Italian Communist youth and international Communist conflict	2808
Italian Communists view their party and Moro government	4926
national conference on organization, Naples, Mar. 12-15, 1964	9296
praise performance of Indonesian Communist Party	4906
Communist Party of Japan, reply of Japanese Communist Party Central Committee to Apr. 18, 1964 letter of Central Committee of Communist Party of Soviet Union	20421
Communist Party of Mongolia, history	14565
Communist Party of North Korea:	
agricultural policy	11060
factional rivalry, history	8929
Communist Party of North Vietnam, artillery chapter struggles against fraud and falsification	9264
Communist Party of Portugal, Portuguese opposition	10991
Communist Party of Soviet Union:	
biological sciences, development, decree of November Plenum of Central Committee, CPSU	10866
Central Committee, letters exchanged with CCP	12885
Ideology and psychology	998
Leninist principle of collectivism, restoration, etc., in party leadership, 1953-63, USSR study	19994
new 5-year plan, problems in working out planned economy	12881
party educational work in Frunzenskiy Rayon of Moscow	20122

	Entry
Communist Party of Soviet Union—Continued	
pedagogical science, new program and problems	5363
Plenum of Central Committee, role in national production goals, report	1120
public health program	19065
scientific-atheistic work, new stage in advancing, USSR study	9301
successful fulfillment of program in field of public health	18516
Communist Party of Spain, party militants, Secretary-General's speech, Apr. 19, 1964	19942
Communist Party of Syria, Central Committee, statement	16470
Communist Party of United States, assistance to foreign Communist parties, hearing	2126
Communities, see Cities and towns—Redevelopment (city planning, etc.).	
Community development programs:	
career opportunities	19808
community development abstracts	21374
community development review	2463
Federal grant assistance for community renewal	1647
homes, etc., publications, price list, housing, chronology of major Federal actions, July 1892 through 1963	7686
smaller communities program in operation	15972
work and training under public welfare amendments of 1962	4660
Community facilities:	
air traffic patterns and community characteristics	83
health services for chronically ill and aged, PHS project grants program	15166
Navy design manual, changes	3204
service programs for public housing	21861
status of women, President's committee, report	5638
Community Facilities Administration:	
design awards, program, 1964	21099
news releases	3878
public works planning programs, inadequate collections procedures, etc., GAO report	4764
Community health, see Health.	
Community health services, see Health.	
Community life:	
Army, troop topics	17041
how organizations can advance their community civil defense program, handbook	10094
improving conditions for agricultural migrants	18613
welcoming visiting educators from abroad, suggestions	10476
Community mental health advances	11444
Community planning for accident coverage	9711
Community Relations Service:	
director, nomination of LeRoy Collins, hearing	14132
establish—hearings	6514, 14017
law	13900
facts about CRS as provided under 1964 Civil rights law	17158
goals, etc. (address)	15377
role in implementing civil rights law (address)	17166
services rendered on request or on own motion (address)	17165
Community surveys:	
wages, 1948-June 1962	5440
wages, 1948-July 1964	21676

# INDEX 1964

	Entry		Entry
Compacts (Interstate), <i>see</i> Interstate agreements.		Computers—Continued	
Companies:		method for using to work out consolidated labor norms, USSR study	16561
filing annual reports with SEC, directory, 1963	9758	technology, use in statistical work, USSR study	10755
mortgage insurance, Federal Home Loan Bank Board inquiry, statement	14238	<i>see also</i> Cybernetics—Electronic computers—Perceptron.	
small, employee suggestion system.	16858	Computing machines, <i>see</i> Calculating machines.	
Companion to elderly person, suggested training program	15840	Conaway, C. L.:	
Compensation, <i>see</i> Employers' liability and workmen's compensation—Pensions—Salaries—Wages.		minutes, 132d meeting of Missouri Basin Inter-Agency Committee	1447
Competition:		minutes, 133d meeting of Missouri Basin Inter-Agency Committee	5499
cattlemen and USDA (address)	7915	minutes, 134th meeting of Missouri Basin Inter-Agency Committee	7464
competitiveness on the sea lanes (remarks)	18653	minutes, 135th meeting of Missouri Basin Inter-Agency Committee	11347
dual distribution and related vertical integration impact upon small business, hearings	415, 6370, 8401, 12156	minutes, 136th meeting of Missouri Basin Inter-Agency Committee	16649
livestock marketing, equalize, hearings	4487	minutes, 137th meeting of Missouri Basin Inter-Agency Committee	16650
Soviet scientific competitions, results	20230	Concentrated foods, <i>see</i> names or classes of foods.	
unfair commercial activities in commerce, civil remedies to persons damaged, provide, hearings	17656	Concentration (metallurgy):	
Compost, preparing	20903	deep iron ore process is making slow progress, USSR study	18408
Compounds, complex, chemistry of, 9th all-Union conference, USSR report	20243	Concentrators, aluminum solar, 60-inch stretch-formed	13144
<i>see also</i> names or classes of compounds, or purpose for which used.		Concessions:	
Comprehensive export schedule	8809	Mount Rainier National Park facilities, revenues due Govt. illegally expended for rehabilitation, etc., GAO report	21340
Comprelli, F. A., materials for superheated fuel sheaths	10030	National Park Service policies, establish—	
Compress, weighing bales of cotton at	11736	hearings	12139
Compressed air:		report	12060
gases encountered at elevated pressures, physiological effects, safe use of respiratory protective equipment	18706	Washington National Airport, increase periods for agreements, hearing	21206
new opportunities for pneumatic devices, USSR study	7128	Concrete:	
Compressed gases, <i>see</i> Gases.		and concreting materials exposed to natural weathering, performance, investigation—	
Compressibility, effects on laminar sublayer of turbulent boundary layer	20584	revisions	2301
Compressors:		supplements	2300, 21284
current industrial reports	19297	asphaltic overlay test track, Sharonville, Ohio	4670
Federal item identification guides for supply cataloging	12292	block revetment near Benedict, Md	12336
supplements	3473	epoxy-asphalt mixtures, laboratory and field study	6598
industry, review of 1963, outlook for 1964	6011	gravity prototype structure for civil works projects, instrumentation for measurement of structural behavior, engineering manual, change	19654
Compton, W. Dale, experimental investigation of radiation effects in semiconductors	14891	high-compressive-strength, development of mixtures	11804
Comptroller General, <i>see</i> General Accounting Office.		horizontal construction joints, methods of preparing, errata sheet	6601
Computations, <i>see</i> Numerical calculations.		lightweight and normal-weight, creep and drying shrinkage	9634
Computers:		manual	1572
application to heat flow and cost analysis in furnace wall design	18699	mattresses, stainless and copper-clad steel wires, galvanic effect	14214
computer mathematics and engineering, USSR study	20247	pavements, standard practice, Engineer Corps, Army	2295-96
development and computer technology, Soviet systems	10758	pore pressure measuring instruments investigation, literature review, etc	19665
inhibitor circuits, rate control devices and compilers, USSR studies	9329	prestressed rigid pavement on low strength subgrade, model tests	12352
mathematical problems of cybernetics and computer technology, USSR study	20269	protective coatings	14208
mathematical simulation and electric circuits	9315		
mathematics, complex information organization, etc., USSR study	18316		

try

561

755

447

499

464

347

649

650

408

144

340

139

060

206

301

284

670

336

598

654

804

601

634

572

214

-96

665

352

208

Entry

Concrete—Continued

reinforcing steel, protection from

corrosion 14207

repairs and utilities, technical manual 4288

standard practice, engineering and

design manual 4665

Waterways Experiment Station research capabilities 630

see also names of manufactured articles.

Condensation, behavior, of alkali-

metal and mercury vapors flowing

through nozzles 18789

Condensation trails, contrails, USSR

study 7183

Condensed milk, see Milk.

Condenser tubes, see Tubes.

Condensing pressure drop by improved

Lockhard-Martinelli method 21729

Conditioning loblolly pine stands in

eastern Maryland for regeneration 787

Conduct of life:

conduct and discipline, FAA handbook 12379

duty, honor, country (address) 8020

goals for all men, friendly American 9684

North Vietnam general on Communist morality 9021

see also Ethics.

Conduction of heat, see Heat transfer.

Conductivity (electric), see Electric

conductivity.

Conductors (electric), see Electric

conductors.

Cone, Clarence D., Jr.:

aerodynamic design of wings with

cambered span having minimum

induced drag 7556

sa/plane design for thermal soar-

ing 7502

Cones:

blunted—

base contour changes effect on

damping in pitch 1472

induced pressures and shock

shapes in hypersonic flow 9584

longitudinal aerodynamic characteristics at Mach nos. of 3.5,

4.2, and 6.0 7546

mass-transfer cooling to Mach no.

of 10.6, free-flight investigation 9588

static stability characteristics of

low-finesse-ratio bodies of revolution at Mach number of 24.5

in helium 11409

entry vehicles, aerodynamic heating

at speeds in excess of earth

parabolic speed 5526

finite thin, magnetic field by use of

Legendre polynomials 16708

flank losses, effects in theory of

space-probe entry under conditions of high mass loss 1469

laminar convective heat transfer

and boundary-layer characteristics at speeds to 24 km/sec 18786

right circular, for supersonic flow

at small angle of attack, tables 14796

at zero angle of attack, tables 11360

at zero yaw in air as perfect gas,

correlation graphs 14872

semivertex angle 12.5°, cooling by

ejection of hydrogen and helium from its apex at Mach 7,

experimental results 20604

sharp, measurement of heat-transfer

and recovery temperatures

of turbulent boundary layer

with foreign gas injection 9593

Entry

Cones—Continued

sharp, right circular models, stability

and location of pressure at

hypersonic speeds, study 11410

vortex, prerelining pig iron 9506

see also names of conifers.

Confectionery:

additives, amend food, drug, and

cosmetic act—

hearing 12147

reports 13981, 15547

candy and other confectionery industry,

review of 1963, outlook for 1960 6012, 15299

current industrial reports 3390, 11893

sales and distribution, 1963 11879

Confederacy, United Daughters of the,

see United Daughters of the

Confederacy.

Confederated Tribes of Colville Reservation,

see Colville Reservation.

Conference committees:

reports 337,

382-384, 2050, 2056, 2065-66,

2081-82, 2089, 2099-2100, 2103,

4458, 4482, 6292-93, 6297-98,

6319, 12049-50, 12077, 13951,

13955, 13958, 13961, 15481,

15487, 15497, 15533, 15537,

15555-57, 17514, 17559, 17572,

17580-581, 17592, 17595-597,

17602-5, 17613-616, 17619,

17623-625, 17759, 19464-465,

19483, 19493-494, 21193-194,

21196-198.

Conference on Meteorological Support

for Aerospace Testing and

Operation:

proceedings, July 1963 13158

errata 14795

Conference on New Technology, Lewis

Research Center, general information 21743

Conference on Non-Linear Processes

in Ionosphere, Dec. 16-17,

1963, papers 11438

Conferences, congresses, etc.:

civil defense, successful meetings,

guide 17128

conference and practice requirements,

Internal Revenue Service 10688

conference on cooperation among

scientific-technical organizations of

Socialist countries,

Budapest, May 11-16, 1964 16562

future international meetings,

world list 4167-68

International organization and

conference series 1599-1600,

7769, 11623-624, 18959, 20821-

822, 21880.

nuclear science conference literature,

availability 1780, 8084, 13717

nuclear science, indexes 4300, 13709

Soviet bloc 1182, 7258, 11173, 14595,

16534, 20035

JPRS serial publication notice 1354

Soviet metallurgy 890

Tashkent Conference on Peaceful

Uses of Atomic Energy, 1960,

proceedings 19225

White House Regional Conferences,

Nov. 1961, report 13383

Yugoslav congress for industrial

medicine 7109

see also names of conferences,

etc.—also subject of conference.

Confidential material:

safeguarding, industrial security

manual 10446

safeguarding of classified information,

agreement with Italy 20828



# INDEX 1964

	Entry		Entry
Configurations:		Congress of United States—Con.	
blunt cylinder-flare, heat transfer rates and ablation in free flight	18738	periodic review of Federal grants—In-aid—	
blunted cylinder-flare, ablation, investigation to Mach number of 8.48	14884	hearings	6511
canard airplane, effects of configuration geometry on transonic aerodynamic characteristics	20595	reports	12219
hypersonic Mach numbers in conical and contoured nozzles, longitudinal characteristics	20612	reports to be made to Congress, list	6223
landplane and floatplane, U-10B performance tests	9975	Republican report—	
pyramidal reentry, with cambered variable-sweep wings and longitudinal controls, transonic investigation	3019	88th Congress, 1st session	2133
supersonic lateral-directional characteristics of 45° swept wing-body-tail model with various body cross-sectional shapes	16693	88th Congress, 2d session	19536
supersonic transport, take-off performance	14855	supplement	21218
3 exit vane cascade ducted fan, thrust vectoring effectiveness	20575	summary of 8-year Kennedy record and digest of major accomplishments, 1961-63	4516
Confinement, behavioral testing in space capsule	3010-11	see also Numerical lists and schedule of volumes of reports and documents—Senate	
Confirmation of various laws by Supreme Soviet RSFSR	20120	Congressional directory, see Congress of United States	
Conflict of interests, avoiding in defense contracting and employment, report	354	Congressional committees:	
Conger, Paul S., new species of marine pennate Diatom from Honolulu Harbor	21871	witnesses, omitting names from reports—	
Congdon, C. C., control of cell division and induction of cancer	13285	law	21148
Congo (Brazzaville):		report	19576
foreign trade regulations	21073	Congressional districts:	
Congo (Léopoldville):		atlas, 89th Congress	10289
agricultural commodities, agreements	3155-56, 9812, 15107, 21884, 21892	data book, 88th Congress, statistical abstracts, supplement—	
agricultural commodities, agreement between United States and United Nations	21883	departmental edition	4345
cult of dead among Balambo	16307	document edition	4430
defense, furnishing of equipment, materials, and services, agreement	9832	redistricting, proposals, hearings	17657
foreign trade regulations	15985	Congressional documents, numerical lists and schedule of volumes, 88th Congress, 1st session	11544
gazetteer, official standard names	18099	Congressional list (series)	4830
Congress of United States:		Congressional Medal of Honor, see Medal of Honor	
code of Federal regulations	10536	Congressional Medal of National Honor, bestowed upon Henry J. Kaiser, issuance of gold medal, authorize, report	10254
Congressional record—		Congressional Office of Science and Technology, establish, hearing	4490
daily	3350	Congressional record, see Congress of United States	
daily, index	3351	Congressional serial set	232
88th Congress, 1st session, bound volumes	6127-30, 8192-95, 10135, 11981-985, 13833-836, 15378	1859-61, 4417-19, 6133-36, 8196-98, 10136-138, 13839, 15380-382, 19369-370,	
daily digest	21102	schedule of volumes, 88th Congress, 1st session	11544
date of meeting—		Confers:	
88th Congress, 2d session, law	1975	wood density and growth of conifers introduced to Hawaii	19749
89th Congress, 1st session, law	21141	young-growth mixed stands, seed-tree and selection, harvesting costs, comparison	2377
directory, official edition, 88th Congress, 2d session	1858	Conklin, Maxwell R., address, Jan. 9, 1959	11912
integrity, promote public confidence, hearings	14156	Conley, John T., AFFTC real-time range data acquisition and transmission system	5878
legislative records, 88th Congress, 2d session, digest	21217	Conley, Thomas D., sunrise effects on east-west ionospheric propagation paths	13629
major legislative actions, 88th Congress	273, 4425, 8240, 10151, 13917, 17443, 19436-437, 15401,	Conn, Joseph H., vibration isolation of satellite tape recorders	7492
Members, issuance of identification cards to spouses, report	6316	Conn, Stetson, guarding United States and its outposts	11312
memorial addresses and tributes in eulogy of the late President John F. Kennedy	15606	Connecticut:	
print as Senate document, report	4476, 4535	annual survey of manufactures, 1962, standard metropolitan statistical areas, and large industrial counties, statistics	4342
		eastern, Putnam group	10780
		electric rate book	10526
		export potential, increasing (address)	223
		fishery products, wholesale dealers, list	705, 18006
		floods, magnitude and frequency	21359
		labor organizations, reporting, regular	16570

# JANUARY-DECEMBER

Entry

6511  
12219

6223

2133  
19536  
21218

4516

21148  
19576

19289

4345  
4430  
7657

1544  
4830

0254

4499

232  
1-36  
1839

1544

0749

2377

1912

5878

3629

7492

1312

1342

0780

5526

223

5006

359

570

Entry

Connecticut—Continued	
minerals industry, minerals year-	
book chapter	20487
municipal waste facilities, 1962 in-	
ventory	3101
municipal water facilities	18906
north central, ground water re-	
sources	8782
weather stations, decadal census	15161
Connecticut Beverage Co., Inc., relief	15453,
19537, 21105	
Connector for vacuum-jacketed lines	
cuts tubing system cost	13181
Connectors (electric):	
compact coaxial connector for print-	
ed circuit reliability	13207
flat cable, design and development	7602
hand soldering, quality require-	
ments	21740
modified rf coaxial connector ends	
vacuum chamber wiring prob-	
lems	13204
reliable electrical connections, tech-	
nology handbook	7478
use in thermocouple circuits,	
design	11377
Conover, Helen F., Africa south of	
the Sahara, selected, annotated	
list of writings	11303
Conover, John H., identification and	
significance of orographically	
induced clouds observed by	
TIROS satellites	20966
Conscription:	
exemption of sole surviving son	
whose father died as result of	
military service	6196
hearing	13908
law	2210,
reports	14069
local board memoranda	3690
selective service (periodical)	4031
selective service regulations	4032
Consen, Ewald J., relief	2017,
6152, 6395	
Conservation, see Natural resources—	
Soil conservation—also subjects	
Conservation notes	6712,
12425-426, 14274	
Conserving our national resources	11778
Consolazio, C. Frank:	
excretion of lipid and lipid sub-	
stances in human sweat	8045
trace mineral losses in sweat	19224
Constitution of United States:	
amendment to guarantee State's	
right to apportion one house of	
legislature on factors other	
than population, report	19460
amendments—	
equal rights, report	17858
investigation, authorization, re-	
port	6450
investigations, expenses, report	17809
Presidential inability and succe-	
sion to office of Vice Presi-	
dent—	
hearings	14148
report	17727
proposed, 88th Cong. 1st sess.,	
list, etc., report	10401
school prayers and Bible read-	
ing—	
hearings	17658
hearings, print additional	
copies, reports	17561,
study of proposals	10328
constitutional rights—	
American Indians, hearings	6515
enforce right to vote, hearings	6514
investigation, authorization, re-	
port	6451
investigation, expenses, report	17810

Entry

Constitution of United States—Con-	
stitutional rights—Continued	
mentally ill in D.C.—	
law	19405
reports	6476, 21195
military personnel, hearings, sum-	
mary	10426
study, subcommittee activities,	
report	10400
Liberty amendment proposals, abol-	
ish Federal income tax, dispose	
of all Federal business activi-	
ties and limit treaty-making	
powers, fallacies and dangers	4519
print as Senate document, re-	
port	4537
our Constitution and Government,	
Federal textbook on citizen-	
ship	18158, 19810
text	14256
text, with Declaration of Indepen-	
dence, etc.	17447
print as House document re-	
ports	6315, 8423
Constitution Week, bulletin	14359
Constitutional rights, see Constitution	
of United States.	
Constitutions, States, amendment to	
assure continuity of govern-	
ment, explanation	19646
Construction, see Building—Building	
trades—Construction Indus-	
try—Installations (military).	
Construction equipment, see Building	
machinery.	
Construction grants for mental retard-	
ation research centers	21790
Construction industry:	
construction activity, report	3355
announcement and order form	13747
construction and building materials	
industries, national trade asso-	
ciations and professional soci-	
eties, list	148
construction authorized, Washing-	
ton, D.C., area	3352
construction report (periodical)	3358
construction reports	3352-57, 6037
announcement and order form	13747
economic situation and housing	
construction outlook, 1965 (re-	
marks)	19354
Hungarian, 1961-65, translation	21625
metropolitan area safety program,	
patterns for (remarks)	13036
permits—	
housing authorized	6037
housing, new private units	15307
housing units, new	8353
residential construction, new	8354
radioactive isotopes and construc-	
tion industry	1768
safety codes, State compared with	
ASA, excavation, chart	2947
USSR—	
capital construction in Ukrain-	
ian SSR	16465
translations	2817, 6952, 11208
wage and hour provisions, fair la-	
bor standards act, coverage	11678
Construction labor, see Labor.	
Construction machinery, see Building	
machinery.	
Construction mechanic 3 & 2, Navy	
training course	13315
Construction of Military Hospital Fa-	
cilities, Special Subcommittee,	
hearings	17640
Construction reserve funds, see	
Shipbuilding.	
Consular and Migration Affairs Bu-	
reau:	
naming—	
law	1934
report	384

# INDEX 1964

	Entry
Consular service, <i>see</i> Consuls.	
Consuls:	
convention with—	
Japan.....	18966
Republic of Korea.....	5700
Russia, text, etc.....	14028
foreign consular offices in U.S.....	7749
errata.....	11615
Consultants:	
labor, reporting requirements under	
labor-management reporting	16577
and disclosure act.....	
surgical, activities in World War	
II.....	10022
Consumer credit, <i>see</i> Installment	
credit.....	
Consumer finance companies, <i>see</i>	
Finance companies.	
Consumer goods, <i>see</i> Commercial prod-	
ucts.	
Consumer income, <i>see</i> Income.	
Consumers:	
American consumer, king or pawn?	
(address).....	13820
American consumer, message from	
the President.....	6208
business community and consumer	
affairs program (address).....	11967
buying indicators, series.....	8132
11907, 17108	
buying intentions, automobiles,	
etc.....	8132, 11907, 17108
buying intentions, series.....	183
credit, quick guide.....	16950
cooperatives, USSR strict control	
over financial activities.....	11054
expenditures and income—	
Anchorage, Alaska.....	2951
Athol, Mass.....	11269
Bakersfield, Calif.....	9381
Baton Rouge, La.....	7372
Cambridge, Ohio.....	11272
Crookston, Minn.....	11272
Denver, Colo.....	1368-69
Durham, N.C.....	2956, 5427
Eureka, Calif.....	11271
Fairbanks, Alaska.....	1366
Florence, Ala.....	11270
Gainesville, Tex.....	11270
Green Bay, Wis.....	2957, 5428
Honolulu, Hawaii.....	1370-71
Ketchikan, Alaska.....	1367, 5426
Lancaster, Pa.....	2952-53
Las Vegas, Nev.....	9379-80
Logansport, Ind.....	11272
Mangum, Okla.....	11270
Manhattan, Kans.....	11272
Martinsville, Va.....	11270
Mennasha, Wis.....	11272
Millville, N.J.....	11269
Okmulgee, Okla.....	11270
Orem, Utah.....	11271
rural nonfarm areas—	
northeastern region.....	18626
southern region.....	18627
United States.....	16586
western region.....	14687
Sehring, Fla.....	11270
Southbridge, Mass.....	11269
urban places in—	
North Central region.....	13044
northeastern region.....	13043, 18621
southern region.....	13045
western region.....	14686, 18622
urban United States.....	11268,
18623-625	
Wichita, Kans.....	2954-55
FDA information materials, list.....	6735
financial survey, 1963, character-	
istics.....	8587
household, acceptance of instant	
sweetpotato flakes.....	13588
information, price list.....	21842
interests, protection (address).....	20732

	Entry
Consumers—Continued	
price index.....	3362
and food distribution changes.....	7419
revised, statistical structure.....	20447
selected items and groups.....	3363
short description.....	21675
prices and living conditions, statis-	
tical needs and resources, con-	
ference report.....	13085
protection activities of State gov-	
ernments, report.....	358
publications, list.....	4830
purchases of citrus fruit, juices,	
drinks, and other products.....	3364
retailers' share in Administration	
program (address).....	8189
role of consumer in the American	
economy (address).....	16817
service, USDA's report (period-	
ical).....	18160
shopping, publications, list.....	15038
tax cut and expansion of demand	
(text).....	19365
USDA marketing programs and	
services operating today (ad-	
dress).....	5865
USDA provides multiple services	
for consumers (remarks).....	11781
USDA services, guide.....	7936
younger and older, impact of rising	
prices.....	5429
Consumption (economics), <i>see</i> Food.	
Contagion and contagious diseases:	
experimental studies on infectious	
diseases, USSR.....	21414
immunological and epidemiological	
studies in infectious diseases,	
USSR.....	2627
morbidity and mortality weekly re-	
port.....	3754
publications, price list.....	5643
World War II, arthropodborne dis-	
eases other than malaria.....	17056
<i>see also</i> names of disease.	
Containers:	
articles imported in containers,	
marking requirements, report.....	2065
closures, current industrial re-	
ports.....	3390, 10050
Federal item identification guides	
for supply cataloging.....	12291
supplements.....	3472
glass, current industrial reports.....	8118
glass, industry review of 1963, out-	
look for 1964.....	4330
industry reports.....	3365
insert, loading.....	13681
standard act of 1928, amend—	
hearings.....	2124
law.....	17375
reports.....	2037, 17749
steel, labelling—	
hearing.....	4501
reports.....	13983, 15545
uneconomical-size, for paint prod-	
ucts, unnecessary costs result-	
ing, Defense Department, GAO	
report.....	18094
<i>see also</i> types of containers.	
Contamination:	
and self-purification of River Oka,	
USSR study.....	20217
controlled, to develop sterilization	
procedures for sealed compo-	
nents of spacecraft.....	77
nuclear accident radiological con-	
trol.....	11835
radioactive isotopes, diagnosis and	
treatment, USSR study.....	4924
radioactive, of external environ-	
ment.....	10023
radioactive, outer space, hygienic	
problems, USSR study.....	7060
radioactive, seas and oceans, USSR	
study.....	18305

try

362  
419  
447  
363  
375

085

358

330

364

189

317

160

338

365

365

781

336

129

114

127

54

443

356

365

50

91

72

18

30

365

81

24

75

49

01

45

94

17

77

35

24

23

60

05

Entry

Contests, <i>see</i> names of contests, or subjects involved.	
Continental Air Lines, Inc., accident.	13788
Continental Aviation and Engineering Corporation, leasing electronic data processing system, unnecessary costs, GAO report.	10622
Continental Shelf, law of the sea, convention adopted by UN conference, Geneva, Apr. 29, 1958.	15114
Continuing overall economic development programs.	13662
Continuity tester screens out faulty socket connections.	13210
Continuous operative-productive planning method, USSR.	16143
Contract Appeals, Corps of Engineers, Board of, <i>see</i> Engineers Corps Board of Contract Appeals.	
Contractions, <i>see</i> Abbreviations.	
Contractor reports NASA CR (series)	1448, 5500, 7468-71, 9530-36, 11349-356, 13139-154, 14767-792, 16652-656, 18717-723, 20519-532, 21725-738.
Contractors:	
farm labor, registration—	
appropriation, 1965, proposal, report	19527
law	19390
reports for NASA—	
preparing repro typing and layout	16665
preparing technical illustrating.	16666
Veterans Administration medical research and development, indemnification—	
law	17292
report	15753
<i>see also</i> Government contracts.	
Contracts:	
electric transmission construction contract, labor and materials.	18932
REA distribution line extension, construction contract	7722
<i>see also</i> Government contracts.	
Contrails, <i>see</i> Condensation trails.	
Control (vehicle), <i>see</i> Airplanes—	
Helicopters—Remote control—	
Rockets—Satellites—Spacecraft.	
Control areas and zones, <i>see</i> Airways.	
Control augmentation critical experiments	10026
Control monitors, test set AN/ASM-106 and C4298/ASW-20, instrument calibration procedure, technical manual.	16802
Control of Cell Division and Induction of Cancer, International Symposium, <i>see</i> International Symposium on Control of Cell Division and Induction of Cancer.	
Control surfaces, <i>see</i> Missiles.	
Control systems:	
attitude control of space-vehicle upper-stage, use of rotating-solid-rocket system	16689
automatic—	
flight, for A-4 series aircraft, unnecessary costs incurred in purchase, GAO report.	19766
piecewise linear, determination of dynamic processes.	9622
theory and practice, USSR articles	8887
USSR study	14438
variable structure for controlling objects whose parameters vary, USSR study	2711
bang-bang path control for reentry vehicle, feasibility study.	1468

Entry

Control systems—Continued	
biological—	
investigation of continuous models on electronic computer, USSR study	10876
Soviet research, survey of published literature, 1962-63.	10877
combination automatic with variable structures, principles for building, USSR study.	12724
constant linear dynamical systems with bang-bang controller, synthesis technique	16724
continuous models, investigation on electronic computer, USSR study	9138
doubling actuating elements, USSR study	14573
electromagnetic attitude, study.	11349
lags and man-machine system performance	14791
nonlinear adaptive systems with storage	14777
nonlinear processes, adaptive-predictive modeling	20521
on-off reaction, simulator studies of manual control of vehicle attitude using	1473
optimum control theory, problems, USSR study	9346
optimum control, numerical method of solving problems, USSR study	16314
proportional-type lateral, capability of providing aerodynamics heading-angle trajectory control during reentry.	14876
ram-controlled system, developed by National Bureau of Standards.	9639
rocket booster, plants containing derivatives of control variable	13145
theory, problems, USSR studies.	14632
USSR development	10846
<i>see also</i> Feedback control systems.	
Controlled nuclear fusion	13723
Controllers, <i>see</i> Altitude controller.	
Controlling insects on flowers.	19063
Controls (aircraft), <i>see</i> Aircraft.	
Controverted cases, New York State workmen's compensation	16909
Convalescence, mentally ill, leave from hospitals, public assistance agreements, etc., guides.	8524
Convallaria, <i>see</i> Lilies-of-the-valley.	
Convection of heat, <i>see</i> Heat transfer.	
Convention of American Instructors of the Deaf, proceedings of 41st meeting, print as Senate document, reports	15680, 19475
Conventions and treaties, <i>see</i> subject.	
Conversion (industrial):	
experimental conversion of hematite to magnetite with solid reductants	5485
Conversion tables for use with national fire-danger rating system in intermountain area.	12454
Converters, ALGOL-60, USSR study.	9229
<i>see also</i> Thermionic converters.	
Converters (electric), <i>see</i> Electric current converters.	
Convergences:	
aircraft, validity of titles—	
law	13895
reports	2063, 12223
Conveyors:	
photo cameras on conveyor.	5914
poultry processing, dual track system	9948
Convict Creek, air, water temperatures, and stream flow data.	10577
Cook, A. Clinton, Mexican winter vegetable production, survey.	14288



# INDEX 1964

Entry	Entry
Cook, Harlan, measurements of efflux patterns and flow rates from cylindrical tubes in free-molecule and slip flows-----	20606
Cook, Warnilla A., outpatient psychiatric clinics, community service activities, State and total U.S.-----	13286
Cook Inlet region, Alaska: glacial history-----	10644
middle Bajocian ammonites-----	18129
Cooke, Julian P., sound transmission in helium and various gases at low pressures-----	19180
Cookery: changes in strontium-90 content of food products after cooking, USSR study-----	10759
outdoor fish cookery-----	17997
see also Recipes.	
Cooking, see Cookery.	
Cooking appliances, current industrial reports-----	3390
Cookson, John A.: Army area handbook-----	
Nigeria-----	17054
Sudan-----	17047
Coolants: lubricant fluids in cutting metals and technique of their application-----	82
integral channels are simply made by melt-out method-----	14807
reactor, reclamation, catalytic hydrocracking of polyphenyl systems-----	8059
Cooling: biphenyl liquid heat transfer, etc., studies-----	10032
engineered performance standards-----	
formulas-----	7870
handbook-----	7871
equipment for cooling your home-----	20922
hot-wire transducer, prolongs life-----	14804
hydrocooling vegetables, guide-----	1708
initiation due to bubble growth on heating surface-----	11413
mass-transfer, on blunt cone to Mach no. of 10.6, free-flight investigation-----	9588
radiative, effect on built-up roofing-----	3053, 7581
reservoirs, hydraulic design, USSR study-----	18364
semivertex angle cone by ejection of hydrogen and helium from its apex at Mach 7, experimental results-----	20604
see also names of commodities.	
Coombs, Charles A.: Treasury and Federal Reserve foreign exchange operations-----	17990
and gold pool-----	8588
Cooper, Anna Grossman, see Grossman-Cooper, Anna.	
Cooper, Glenn A., picnic table for children-----	8636
Cooper, Hilton H., jr., sea water in coastal aquifers-----	10653
Cooper, Jack B., testimony, hearings-----	8456
Cooper, James D.: clays-----	21685
feldspar, nepeline syenite, and apatite-----	18664
kyanite and related minerals-----	14739
taic, soapstone, and pyrophyllite-----	18709
Cooper, Kenneth H., monitor electrocardiograms on actively exercising subject-----	19178
Cooperation in forestry, 1962 yearbook, Department of Agriculture, Forest Service, intermountain region-----	14297
Cooperative research monograph series-----	21274
Cooperative State Experiment Station Service, appropriations, 1963, Agriculture Dept., hearings-----	10286
Cooperative State-Federal research in agriculture and forestry-----	19065
Cooperatives: foreign assistance act of 1961, Humphrey amendment implementation-----	
report, 1963-----	10355
report, 1964-----	21219
print as Senate document, report-----	19574
lead unconditional war on poverty in rural America (remarks)-----	7917
nonprofit, jurisdiction of FPC, amend act-----	15804
hearings-----	17712
report-----	
peasant working cooperatives (SRZ'S), development-----	9057
USSR consumer's, stricter control over financial activities-----	11054
see also Banks for cooperatives-Farmers' cooperative organizations.	
Coordinates: automatic measurement, USSR study-----	2752
elliptic rectangular, tables X and Y-----	16773
State plane coordinate systems, interpretative statement-----	17150
transformation-----	3083
Coos Bay, Oreg., port-----	15876
Coots, see Rails (birds).	
Cope, Dana S., construction of space environment simulator-----	7495
Cope, Oliver B., cutthroat trout, bibliography-----	21317
Copeland, M. I., chromium-gadolinium system-----	18687
Copeland, William L., employment of scientific and technical personnel in State government agencies, 1962-----	14705
Copepods: caligid genus Dentigryps-----	9652
free-living, Ifaluk Atoll in Caroline Islands-----	14961
Hawaiian acanthurid caligoids, parasitic on fishes-----	7602
planktonic, procedure for calculating production, USSR study-----	1055
Copolymers, see Polymers and polymerization.	
Copper: alloys, liquid copper-nickel, activity of copper and nickel-----	9526
aluminum oxide-copper alloy, production properties, USSR study-----	18303
base, spectrochemical standards, NBS preparation-----	20638
content in some soils in European part of USSR-----	18343
deposit, polynomial surface fitting using sample data from underground-----	18704
deposits near western margin of Coast Range batholith-----	18101
fabricating industries, review of 1963, outlook for 1964-----	6023
filaments, impact into aluminum targets at velocities to 16,000 ft. per second-----	7496
geology of deposits, N.C., Va., and Ala-----	800

try  
274  
286  
065  
355  
219  
574  
917  
804  
712  
057  
054  
752  
773  
150  
083  
876  
495  
317  
887  
705  
9652  
961  
7602  
055  
526  
3303  
0638  
3343  
8704  
8101  
3023  
7496  
800

Entry	
Copper—Continued	
industry—	
mineral industry survey,	
monthly	3872
report, annual, 1964	15298
report, quarterly	3371
USSR	1792, 2653
metabolism in hepatolenticular de-	
generation, USSR study	16343
mill and foundry products, current	
industrial reports	3391, 11894
minerals yearbook chapter	21687
ores and concentrates, marketing in	
U.S.	13105
powders, preparation from leach so-	
lutions after precipitation with	
iron	16037
precipitator dust, laboratory smelt-	
ing	5483
reverberatory slags, smelting to re-	
cover iron of low copper and	
sulfur content	14762
scrap, consumers, mineral industry	
survey, monthly	3373
stainless steel and copper-clad steel	
wires, reinforcement for con-	
crete mattresses, galvanic ef-	
fect	14214
Copper ferrite, cuprous and cupric,	
thermodynamic properties	18696
Copper River, Basin, geologic inter-	
pretation of magnetic and	
gravity data	21352
Copper sulfate, report, monthly	3374
Copper sulfide, minerals, leaching with	
autotrophic bacteria	11329
Copperweed, livestock poisoning in	
Western States, reducing	
losses	20915
Coppola, Angelo, relief	2175
Copyright:	
catalog of copyright entries	550,
2249, 4595, 6528-30, 8458, 10441,	
12285, 14158, 15825, 17893-894,	
19009-610.	
code of Federal regulations	8576
decisions of courts, 1961-62	549
law of United States	548
law, revision, preliminary draft,	
discussions and comments	17660
laws, investigation—	
authorization, report	6454
report	10402
Copyright Office:	
bulletins	548-549
report, 1963	14157
Corals:	
Devonian colonial genus <i>Billings-</i>	
<i>astraea</i>	4798
fossil, from Eniwetok Atoll	15945
Corbett, Cora L. F., relief	21183
Corbett, William J., pigment particle	
size separation	14787
Coreboroside, <i>see</i> Glycosides.	
Cord, behavior of liquids on various	
cords for seams of chemical	
and biological protective over-	
garments	11590
Cordage, stockpiling fibers, question-	
able need, GAO report	21339
Cordaro, Joseph T., controlled con-	
tamination approach for de-	
veloping sterilization proce-	
dures for spacecraft	77
Cordierite, low-temperature heat ca-	
pacities and entropies at	
298.15° K	5489
Cordova, Robert M., reconnaissance	
of ground water resources of	
Arkansas Valley region, Ark.	2434
Cordova, Alaska, geologic reconnais-	
sance and test-well drilling	827

Entry	
Core drilling:	
core tests, Simpson area, Alaska	19782
pre-Selma cretaceous core samples	
from outcrop area in western	
Alabama	18107
stress field within core stub in	
borehole	11344
Core materials, honeycomb, sandwich	
constructions affected by size	
of cells	12446
Coregonus, <i>see</i> Whitefish.	
Corelli, John C., radiation damage	
to semiconductors by high-	
energy electron and proton	
radiation	14775
Cores (magnetic):	
ferrite cores for memory devices,	
USSR study	16154
logical elements of transistors and	
tape-wound cores, USSR	
study	19957
new sintering process adjusts mag-	
netic value of ferrite cores	13202
transfluxor circuit amplifies sensing	
current for computer mem-	
ories	9550
Cores (reactors), <i>see</i> Reactors	
(atomic).	
Corey, Richard C., measurement and	
significance of flow properties	
of coal-ash slag	9495
Cork, performance as thermal pro-	
tection material, free-flight	
test results	18766
Corkern, Ray, kenaf, bibliography	6555
Corliss, William R.:	
direct conversion of energy	11875
power reactors in small packages	15293
Corn:	
applying fertilizers, USSR study	9222
artificially dried, stress cracks and	
breakage	34
chinch bug control	19083
composition of commercial grades	13570
dent, temperature and rainfall as	
they affect corn earworm dam-	
age	20896
drying by dryeration process, prog-	
ress report	9910
federal crop insurance, general in-	
formation	653
futures, commitments of traders	3344
futures trading and open con-	
tracts	3550
high yields at minimum expense,	
Soviet agriculture, transla-	
tions	20268
livestock feed, crop insurance pro-	
gram, general information	2313
oil and protein content of inbred	
lines	7895
selection, USSR study	6939
sweet, persistence of telodrin and	
DVT as determined by gas	
chromatography	13564
<i>see also</i> Hominy grits.	
Corn Belt, how to plan a shooting	
field	20927
Corn earworms, <i>see</i> Bollworms.	
Corn grits, <i>see</i> Grits.	
Cornea:	
aseptic inflammation course under	
influence of B-particles from	
radioactive thallium, USSR	
study	12893
mouse, effect of suprarenal hor-	
mones on radiation sensitivity	
of chromosomal apparatus of	
epithelial cells, USSR study	2890
Cornwall, Henry R.:	
geology of Bullfrog quadrangle and	
ore deposits related to Bull-	
frog Hills caldera, Nye County,	
Nev. and Inyo County, Calif.	18133

# INDEX 1964

Entry	Entry
Cornwall, Henry R.—Continued	Correspondence schools and courses:
mineral and water resources of Nevada-----	Industrial College of Armed Forces, course on economics of national security-----
17668	12574
Corona (electricity):	information on schools, courses, etc-----
positive, for electrical precipitation at high temperatures and pressures-----	10460
9514	Navy, training manuals and correspondence courses, lists-----
Corona (solar), see Sun.	7640,
Coronado National Memorial:	20694
general information-----	16804
Spanish edition-----	89
3061	Soil Conservation Service, elementary principles in management-----
Coronary arteries, blood flow, flowmeter for measurement-----	16804
17011	USAFI offerings by colleges, etc., DOD pamphlet-----
Corporations:	19001
collapsible, tax laws, provisions, amend-----	16688
law-----	12584
reports-----	18323
8335,	2659
corporate reorganization releases, SEC-----	7439
3375	diborides in pseudobinary system TiB <sub>2</sub> -CrB <sub>2</sub> -----
doing foreign banking or financing that maintain reserve accounts with Federal reserve banks, 1963, list-----	11324
4719	electrochemical steel corrosion in sea water, role of bacteria, USSR study-----
federally chartered, uniform audit requirements-----	2636
law-----	1533
17363	liquid metals, NASA-AEC meeting, proceedings-----
report-----	13153
17740	mine water of Kizel coal basin, microbiological factors in increasing corrosiveness, USSR study-----
Government control act, certain audit provisions, amend-----	2580
hearing-----	14207
10314	reinforcing steel, protection salt stress corrosion of titanium alloys at 550 F-----
law-----	1460
17377	sodium mass transfer, sample data, screening test data and analysis-----
reports-----	10027
12054, 17746	solder flux leaves corrosion-resistant coating on metal-----
income tax rate, extension-----	20564
law-----	13342
15384	titanium alloys, hot-salt stress-corrosion cracking phenomenon-----
reports-----	21730
12083, 12089, 13955, 14057	11222
income tax, reduction-----	20561
hearings-----	18807
529	Corrupt practices, see Political corruption.
1643	Corsets, current industrial reports-----
income tax returns, statistics 1961-62-----	17089
857, 2449, 12548, 18166	Cortical fibers in retina of monkeys, USSR-----
lenders from jurisdictions outside D.C. making loans secured by D.C. property, clarify status under income and franchise tax act, report-----	10961
15567	Corticosteroids:
manufacturing, quarterly financial report-----	parotid fluid, identification and significance-----
3955	5901
sales, profits, and dividends-----	parotid fluid, levels at 1 and 2 hours after graded doses of ACTH-----
4005	19183
Correction factor for 4-point probe resistivity measurements on thin circular semiconductor samples-----	Cortisone:
9635	anti-atherogenic action in experimental atherosclerosis in rabbits, USSR study-----
Correctional Industries fund: establish for D.C. government-----	12730
law-----	effect on metabolism of ribonucleic acid and its nucleotides in liver development-----
19430	16732
report-----	19186
19456	Cortright, Edgar M., unmanned spacecraft of U.S.-----
Correctional officers, examination announcement, discontinuance notice-----	14793
6087	Corvallis, Oreg., research and field laboratory for water pollution control-----
Corregidor-Bataan Memorial Commission:	11573
annual report, 1964-----	Corydoras, see Catfish.
17473	Cosio Knob quadrangle, Calif., geology-----
appropriations, authorizing-----	12506
law-----	
2218	
report-----	
appropriations, 1965-----	
hearings-----	
6338, 8426	
law-----	
13904	
reports-----	
8288, 8420, 13951	
Correlation (statistics):	
ASTM and Micum coke test methods-----	
16633	
Correlation graphs for supersonic flow around right circular cones at zero yaw in air as perfect gas-----	
14872	
Correlation of oblique shock parameters for ratios of specific heats from 1 to 5/3 with application to real gas flows-----	
11421	
Correlation of turbulent air-bromine coaxial-flow experiment-----	
7524	
Correspondence aids, CA series-----	
11743, 20903	

# JANUARY-DECEMBER

	Entry
Cosmetics:	
F.D.C. regs.-----	4749
food, drug, and cosmetic act--	
enforcement and compliance,	
FDA report, monthly-----	3463
notices of judgment-----	18039
requirements guide for foreign	
manufacturers, etc.-----	18037
text and enforcement regulations--	762
revised pages-----	14287
import detentions, report-----	3968
lip, hair and face preparations,	
flammability in presence of	
100% oxygen-----	13729
USSR physiotherapy methods-----	2792
Cosmic dust:	
bombardment of lunar surface-----	3033
falling on the earth, USSR study--	12968
see also Micrometeoroids.	
Cosmic rays:	
anisotropy-----	18746
conference in Jaipur, USSR report--	21592
earth parameters, equatorial loci--	11799
effect on blood system, USSR study--	1118
galactic, edge of polar plateau and	
their charged albedo-----	9599
intensities and variations prior to	
and during magnetic disturb-	
ances, USSR papers-----	14908
intensity fluctuations in strato-	
sphere caused by solar pro-	
cesses, USSR study-----	16319
nuclear components, investigations	
made on Soviet satellites and	
rockets-----	12986
use of penetrating cosmic radiation	
for determination of mean	
rock-density values, USSR	
study-----	14445
USSR articles-----	14907
Cosmogony, see Universe.	
Cosmology, cosmic electrodynamics,	
fundamentals-----	9624
Cosmonauts:	
diary of a pilot-cosmonaut, USSR--	12930
from airplane to spaceship, notes	
of astronaut flight instructor,	
USSR-----	12617
man in outer space, USSR study--	18503
physiological reactions during ac-	
tion of G-loads, etc., USSR	
study-----	9191
program, USSR translations-----	11189
Soviet--	
space flight-----	19951
story-----	19899
training-----	20291
training for space flight, some	
aspects-----	1083
trainable for 100-hour orbits and	
longer, USSR study-----	10928
COSPAR, see Space Research Com-	
mittee	
Cost:	
analysis, application of computers	
in furnace wall design-----	18699
cost analysis project in children's	
institutions-----	13781
cost and price formation in in-	
dustry, USSR study-----	16192
Defense Department cost reduc-	
tion program, report, 1964-----	15828
establishment of joint project on	
cost analysis in children's in-	
stitutions-----	6056
farm cost situation-----	586
farm, cut costs that cut profits-----	1700
farms, commercial, by type, size,	
and locations-----	13582
geographic mobility-----	13663
industrial output, USSR study-----	21503
low, marketing aids for higher ex-	
port profits-----	19822
production, methods of reducing,	
USSR articles-----	14437

	Entry
Cost--Continued	
rail cost finding procedures and	
principles, explanation-----	873
reduction report, Defense Dept.--	3376
see also names of commodities, e.g.	
Electricity--also subjects.	
Cost accounting, see Accounts and ac-	
counting.	
Cost and standard of living:	
Bulgarian development, transla-	
tions-----	7288
cost-of-living indexes in develop-	
ing countries, computation-----	21670
prices and living conditions, statis-	
tical needs and resources, con-	
ference report-----	13085
public assistance, simplified meth-	
ods for determining needs-----	6603
USSR population-----	7106
Cost ascertainment report, see Postal	
service.	
Cost-of-living allowances, Federal em-	
ployees in nonforeign areas,	
terminating, hearings-----	10342
Costa Rica:	
amateur alien radio operators, au-	
thorization to operate, agree-	
ment-----	20843
economy, basic data-----	8812
foreign trade regulations-----	6848
Inter-American Highway program,	
unnecessary costs resulting	
from inadequacies in adminis-	
tration of right-of-way activi-	
ties, Public Roads Bureau,	
Commerce Dept., GAO report-----	12498
COSTEP, Public Health Service-----	18895
Costilla Creek:	
compact, amendment--	
law-----	1927
report-----	492
Costrell, Edwin S., United States	
policy and international coop-	
eration in Antarctica-----	19447
Costrell, Louis, standard nuclear in-	
strument modules-----	19255
Costume jewelry, see Jewelry.	
Cotter, Perry G.:	
lime-----	21696
sand and gravel-----	21719
slag, iron blast furnace-----	18708
stone-----	21721
Cottingham, R. L., effect of polar-	
nonpolar additives on oil-	
spreading on solids-----	5603
Cotton:	
agreement with Republic of Congo,	
American-Egyptian in Southwest,	
roller ginning-----	4194
bales and samples, changes in qual-	
ity and value during storage-----	5837
bales, transporting with large	
clann trucks-----	20901
bales, weighing at compress-----	11736
Brazil-----	583
broad woven fabrics, current in-	
dustrial reports-----	8115
broad woven goods, current indus-	
trial reports-----	3391, 21031
cloth, prices of cloth, raw cotton,	
and mill margins-----	5933, 15190
cotton and cotton linters--	
foreign growth classification, reg-	
ulations under cotton stand-	
ards act-----	19046
standards-----	19047
cotton and related data, statistics,	
1925-62-----	
1963 supplement-----	1721
1964 supplement-----	19102
cotton fiber and processing tests,	
regulations of Agriculture De-	
partment-----	9



# INDEX 1964

	Entry
Cotton—Continued	
cotton situation	3383
domestic, price equalization, re-	
search program, etc—	
hearings	6401
law	10140
reports	6467, 8323
federal crop insurance, general in-	
formation	4688
fiber and processing test results—	3377
fiber length distribution and yarn	
quality, effects of gin drying	
and cleaning	13589
foreign agriculture circulars	3520
futures, commitments of traders	3343
futures trading and open contracts—	3545
	46, 3550
futures trading, monthly	4088
imports of manufactures, foreign	
trade reports	3528
Iran	14292
irrigation in southeastern United	
States	11753
man-made fiber staple, and linters,	
current industrial reports	3390
summary, 1962-63	6040
monthly cotton linters review	3734
new program for upland cotton	11746
Pakistan	2347
pooled allotments of Billie Sol	
Estes, Agriculture Dept. han-	
dling—	
hearings	532
report	19584
price statistics, monthly	3381
price-support program opportunity	
to reduce Federal expenditures	
and effecting savings by deter-	
ring movement of cotton over	
long distances prior to its	
placement under price-support	
loan, Commodity Credit Cor-	
poration, GAO report	19760
price support programs and acre-	
age allotments, hearings	6491
prices, spot quotations	4048
production—	
and distribution	15303
Central America	2348
crop of 1962	7801
crop of 1963	13749
extent and cost of using chemi-	
cals	12313
monthly release	3382
Spain, trends and prospects	15933
quality evaluating, mechanically	
drawn samples compared with	
cut samples	9950
quality survey, fiber and processing	
tests from selected production	
areas, summary 1963	5819
errata	9937
reports for ginning	4112
seed cotton storage in trailers	7941
sold for export, organization and	
financing of U.S. trade, foreign	
buying practices, etc	14289
spot quotations, relation to spot	
values and average differen-	
tials	19089
storage capacity in older ware-	
houses, increasing	9912
technologist, examination announce-	
ment, discontinuance notice	4386
testing service, tests available,	
equipment and techniques basis	
for interpreting reports	4178
textile industry and consumption,	
prospects in EEC	21323
textiles, industry wage survey	20437

	Entry
Cotton—Continued	
textiles, trade agreement with—	
China	7776, 11638
Greece	18981
India	13470
Israel	7780
Jamaica	13471
Philippines	9821
Spain	18963
Turkey	18982
United Arab Republic	7787
United States, domestic and fore-	
ign, supply and distribution,	
current industrial reports	17101
USSR production report of U.S.	
technical study group, adden-	
dum	13597
varieties planted in early produc-	
ing section of Texas, 1964	13561
varieties planted, 1960-64	15186
variety tests, regional, results	
1962	4190
weekly cotton market review	4148
woven goods finished, current indus-	
trial reports	13753
Yazoo-Mississippi Delta, fiber and	
spinning properties of cotton	
as affected by certain harvest-	
ing and ginning practices,	
1959-60	13587
see also names of manufactured	
articles and materials.	
Cotton County, Okla., soil survey re-	
port	5696
Cotton gins and ginning:	
American-Egyptian cotton in	
Southwest, roller ginning	4194
consolidated cotton report	3378
costs of electric power and fuel for	
driers in cotton gins, Arkan-	
sas and Missouri	2201
costs of ginning cotton by coopera-	
tives at single-gin and 2-gin	
plants, California and Texas	5835
cotton ginnings—	
by counties	3379
by States	3380
effects of ginning practices on cot-	
ton yarn properties, etc	9931
equipment, 1964	15185
gin drying and cleaning of cotton,	
effects on fiber length distribu-	
tion and yarn quality	13589
handbook	7912
increasing efficiency of power used	
for materials handling in	
southwestern cotton gins	12312
reports on cotton ginning	4112
Yazoo-Mississippi Delta—	
effects of certain practices on	
fiber and spinning properties of	
cotton, 1959-60	13587
power requirements for high-	
capacity cotton gins	7892
Cotton machinery, mechanical picker	
attachments for harvesting cot-	
ton research plots	4191
Cotton seed, see Cottonseed.	
Cottonseed:	
oil content, rapid determination,	
evaluation of method	1723
presowing treatment with protista	
irradiated with gamma-rays of	
Co <sup>60</sup>	1250
production, 1962	7801
quality, 1963	15187
Cottonseed meal, futures trading and	
open contracts	3549
Cottonseed oil:	
futures, commitments of traders	3343
futures trading and open contracts	3546
Cottonseed oil mills, operating proce-	
dures and labor utilization,	
1961-62 season	17905

# JANUARY-DECEMBER

Entry

1638	Cottonwood:	
8981	improvement system for commercial planters	18076
3470	veneer cutting and drying properties	18058
7780	Cottonwood pipeline, design and construction, technical report	21862
3471	Coules, John, human engineering evaluation of mobile air traffic control and communication system	5890
9821	Council, Clara E., recent mortality trends in Chile	9732
8963	Council area, Idaho, ground water	8783
8982	Council for Economic Mutual Assistance:	
7787	growing cooperation raises benefit of international socialist division of labor	2569
	rules governing railroad freight car pool	16410
7101	standardizing design of clothing in CEMA countries	20325
	steroid research problems, coordination conference	16129
3597	structural shifts in economies of members	21636
	survey of activities, translations	12694
	Council of Economic Advisers:	
	member, nomination of Otto Eckstein, hearing	17871
	report, 1963—	
	departmental edition	5635
	document edition	4442
	Council of State Governments, report on suggested legislation for 1945, excerpt	17150
	Counseling:	
	Army recruiting & career counseling journal	3965
	basic supervisory training course—commitment to youth, progress under national defense education act, 1958-63, report	17913
	develops stronger schools	607
	form for use by supervising officers, development	15234
	national defense education act of 1958—	
	NDEA and higher education (periodical)	3782
	training institutes, announcement	4628
	training institutes, program, policies and procedures manual	14191
	Counselors, school; rehabilitation, vocational, employment outlook	9387
	Counterfeits, see Forgeries	
	Counterline-screenline equipment. Post Office procurement practices, GAO report	8725
	Counters, see Electronic counters	
	Radiation detection instruments—Ring counters—Scintillation counters	
	Counties:	
	agricultural committee system, stabilize, etc.—	
	law	17393
	reports	17523, 17769
	food supplies available in case of national emergency	17902
	governments, finances, census of governments, 1962	11890
	low-income, family income and related characteristics	21926
	State and county mental hospitals, patient movement data, 1961—	21794
	see also subject involved	
	Counting devices, electromechanical fishing and counting fence used in Ireland	14267
	Countries, see Foreign countries	
	Countryman, Clive M., electronic fire weather station	8659

Entry

Counts, Harlan B., salt-water encroachment, etc., Savannah area, Ga.-S.C.	4808
Coup in South Viet-Nam	91
Couplers (directional):	
elastic coupling phenomena of high speed rigid rotor systems	18999
Courses of study, see Curriculum	
Court of Claims:	
cases, calendar	3385
cases decided—	
Apr. 1-May 31, 1961	551
June 1-July 19, 1961	552
July 19-Dec. 31, 1961	6531
Jan. 1-Mar. 31, 1962	12286
Apr. 1-June 30, 1962	12287
July 1-Oct. 31, 1962	19611
commissioners, increase, report	2090
judgments rendered, list	4517
rules	6532
Court of Customs and Patent Appeals:	
cases adjudged	4094
customs cases adjudged	6533
patent cases adjudged	6534
Court of Military Appeals:	
court martial reports, holdings and decisions	10445
report, 1963	8461
Courter, Joseph A., remarks, June 23, 1964	13036
Courtesy (military), see Military ceremonies, honor and salutes	
Courts, family court, sociological problems	8142
see also Courts of United States—also names of courts	
Courts martial and courts of inquiry:	
Judge Advocate General boards of review and Court of Military Appeals reports, holdings and decisions	10445
manual, 1951, addendum, change—	2250, 21247
military justice, trial procedure	19208
Courts of United States:	
appropriations, 1964—	
hearings	515
law	1974
report	511
appropriations, 1964, deficiency, hearings	10285
appropriations, 1965—	
hearings	8364, 15791
law	17386
reports	10245, 21193, 21233
appropriations, 1965, amendments	8256
appropriation, 1965, supplemental, proposal	19528
copyright decisions	549
Federal judicial system, study—	
authorization, report	6453
report	10399
handbook	285
print as House Document, report	370
judicial review of orders concerning biological products, hearing	12146
jurisdiction, defining, report	17577
jurisdiction in naturalization proceedings, directory	8798
see also District Courts	
Cowan, G. A., symmetry of neutron induced U <sup>235</sup> fission at individual resonances	5980
Cowpens National Battlefield Site, general information	11462
Cows:	
concentrate rations fed, 1963	11649
milk production by months, 1962-63	5712
number on farms, June 1964	16882

# INDEX 1964

Entry	Entry
Cows—Continued	Crawfish, Lithuania, interspecies relations of crayfish in eastern lakes, USSR study----- 13004
roughage fed----- 3163	Crawford, Davis H., laminar-boundary-layer displacement on hemisphere in helium flow----- 9587
summer feeding season----- 13485	Crayfish, <i>see</i> Crawfish.
winter feeding season----- 7697	Cream, fluid milk and cream report-- 3513
iodine-131 concentration in bovine thyroids, measurement----- 7697	Credenza, Antonio, relief--- 431, 6248, 8201
<i>see also</i> Dairy herd improvement associations.	Credit:
Cox, E. F., thermoelectric heat pumps research----- 846	bank credit and money, 1963----- 6685
Cox, John T., relief----- 2008, 12186, 13847	brokers, dealers, and members of national securities exchanges, regulation, supplement----- 682
Coxsackie viruses, B infection, effect of zymosan and endotoxin treatment----- 7983	Communist countries, prohibit extension by Govt. agencies--- 524
Coykendall, Kenneth F., relief----- 15463	hearings----- 485
Coyner, Mary S., Nicaragua, recent shifts in farm output and trade----- 12314	report----- 485
Cozart, Larry C., market for photographic products in United Kingdom and France----- 19279	consumer's quick credit guide----- 16950
CPSU, <i>see</i> Communist Party of Soviet Union.	department store----- 3416
CR series----- 17	Federal programs, study----- 8372
Crab Orchard National Wildlife Refuge, general information----- 8605	helpful or destructive? Army pamphlet----- 11842
Crabs:	housing, code of Federal regulations----- 8568
edible, of United States----- 8604	monetary and credit developments----- 15904
firms canning, list----- 750	sales finance companies operations, monthly report----- 4004
Pacific, application of radiation-pasteurization processes----- 19250	truth in lending act, hearings----- 6498
<i>see also</i> Blue crabs.	USSR bankrupt kolchozes, German study----- 8875
Cracking of metals, <i>see</i> Fracture of metals.	USSR, development of credit relations----- 20283
Craft (nautical):	<i>see also</i> Agricultural credit—Farm credit—Installment credit—Production credit associations—Retail credit.
pleasure craft, safety suggestions, etc----- 6113	Credit insurance, programmes d'assurance et garantie de credit applicable aux exportations des Etats Unis----- 13824
shallow-draft plastic launch, USSR study----- 9060	Credit unions:
small, Federal item identification guides for supply cataloging--- 12297	District of Columbia, repeat act—law----- 17254
supplements----- 3478	report----- 14105
Crafts, Edward C.:	State chartered, 1962----- 3135
remarks-----	<i>see also</i> Federal credit unions.
Nov. 11, 1963----- 1534	Creditors:
Feb. 5, 1964----- 5629	claims, filing, amend bankruptcy act, law----- 255
Feb. 15, 1964----- 7666	nonreporting, non-real-estate farm debt owed to, etc., revised estimates, 1949-64----- 17906
Mar. 6, 1964----- 7668	Creep and drying shrinkage of lightweight and normal-weight concretes----- 9634
Apr. 2, 1964----- 9690	Creep-of-metals:
Sept. 14, 1964----- 18870	aluminum, creep-rupture properties, effect of vacuum----- 5600
Sept. 24, 1964----- 18871	effects of purity and structure on creep properties of arc-melted tungsten----- 21776
Crafts, protective and custodial employees, <i>see</i> Government officials and employees.	polycrystalline solids, influence of grain boundaries on high temperature strength----- 1527
Craig, Richard A., tides in atmospheres of Earth and Mars----- 18722	Cressman, Earle R.:
Cralk, James D., nomination, hearings----- 4576	geology of Georgetown Canyon Snowdrift Mountain area, southeastern Idaho----- 12504
Cramer, Owen P., fire season in Pacific Northwest, 1963----- 14304	stratigraphy and petrology of Permian rocks of southwestern Montana----- 15946
Crandell, Dwight R., surficial geology and geomorphology of Lake Tappa quadrangle, Wash----- 809	Crested wheatgrass, <i>see</i> Wheatgrasses.
Crane, J., development of uranium carbide as nuclear fuel----- 21018	Cretaceous period:
Cranes (birds):	ammonites from southern Alaska----- 6806
hunting, possession, transportation, importation, Federal regulations, 1964-65----- 15925, 19734	cephalopod Haresiceras, possible origin----- 8770
whooping cranes, general information----- 19722	gastropods from Coffee Sand (Upper Cretaceous) of Mississippi----- 18126
Cranium, <i>see</i> Skull.	gastropods in Tennessee and Mississippi (series)----- 18125-126
Crash fires, <i>see</i> Fires.	
Crashes, <i>see</i> Aircraft accidents.	
Crater Lake National Park, general information----- 16762	
Craters:	
Bullfrog Hills caldera, ore deposits----- 18133	
slopes, stability, Nevada test site, Project Sedan----- 122	
Craters of the Moon National Monument, general information----- 21805	
Crates, wood design manual----- 5816	

	Entry		Entry	
	Cretaceous period—Continued		Criminal procedure—Continued	
004	neogastropoda, opisthobranchia and basomatophora from Ripley, Owl Creek, and Prairie Bluff formations	18125	judiciary and judicial procedure, D.C. code of laws—	
587	nonopaque heavy minerals in sandstone, Black Hills, Wyo. and S. Dak.	4777	revise, codify, enact—	
513	pre-Selma cretaceous core samples from outcrop area in western Alabama	18107	law	1970
385	stratigraphy of McCarty A-4 quadrangle, southern Alaska	18110	report	509
582	Upper Cretaceous strata, correlation between U.S. and Europe by means of ammonites	18138	text, revision notes, etc.	4503
524	water in aquifers, Nassau and Queens Counties, N.Y.	6816	see also, indictments,	
485	Crete, sailing directions	7632	Criminals, see Crime and criminals.	
950	Crew leaders, social security information	20797	Criminology, see Crime and criminals.	
416	Crews, see Spacecrews—Submarine crews.		Crimson clover, chemical control of weeds grown for seed production	7950
372			Criner, J. H., hydrology of aquifer systems in Memphis area, Tenn.	19801
542	Crichlow, W. Q., quarterly radio noise data	13274, 16740, 18806	Cripples:	
568	Cricketsonde rocket, see Rockets.		children—	
904	Crime and criminals:		increase in services, comments	2128
004	crime classification, logical forms, USSR study	14452	services for	11917
498	crimes against banking institutions—		children's program, statistical highlights	199, 17121
875	hearing	2113	Critical assemblies:	
283	report	6291	dimensions of systems containing U-235, Pu-239 and U-233	17062
	criminal justice act of 1963, report	378	subcritical assemblies, compilation of references	1772
	criminal justice act of 1964—		Critical materials, see Strategic materials.	
	law	17314	Criticality, two-dimensional calculations for Plum Brook reactor	21767
	report	15555	Croatian Civil Engineers and Technicians Association, biographies of honorary, etc., members	7033
3824	District of Columbia, legislation—		Critiques, literature on brazing, USSR study	18339
	hearings	4579, 8443	Crivella, Bart, salad dressing, mayonnaise & related products	17070
	report	14101	Crocker, L., acid leaching of beryllium ore from Spor Mountain, Utah	1440
	documents, criminological investigation, USSR study	21407	Croft-Murray, Edward, Turner watercolors from British Museum	3056
7254	organized crime and illicit traffic in narcotics, hearings	533, 2239, 19600, 21239	Croker, Thomas C., Jr., two H-C furrow seeders	14327
1105	print additional copies, reports	325, 455	Cronin, J. G., summary of occurrence and development of ground water in the southern high plains of Texas	8781
1335	persons under supervision of Federal probation system, 1963 report	13556	Crook, Charles B., abstracts of material on soil and water conservation	1679, 7890, 9916, 15197, 20898
255	Soviet criminology, some aspects—	10842	Crook County, Wyo.: geology of Upton quadrangle—	19776
7906	uniform crime reports, U.S., 1963	14232	ground water resources and geology	19795
	uniform reporting, quarterly release	4107	Crooked River project: extension—	
9634	value of handwriting examination, USSR study	6956	law	19406
	see also Criminal law.		reports	14072, 17556
5600	Criminal jurisdiction:		Crooks Gap, Wyo., geology and uranium deposits	14337
	status of forces agreement, operations—		Crookston, Minn., consumer expenditures and income, 1961	11272
1776	hearing	2230, 17867	Crop insurance, see Agricultural insurance.	
	reports	2227, 14100, 17855	Crop lands, see Land.	
1527	Criminal Justice Administration and Poverty, Attorney General's Committee on, see Attorney General's Committee on Poverty and Administration of Federal Criminal Justice.		Cropper, Harry H., testimony, hearings	6526
2504	Criminal law:		Cropping, see Rotation of Crops.	
5946	criminal-legal struggle against crimes of churchgoers, etc., USSR study	20369	Crops:	
6806	District of Columbia laws, amend, report	17755	agricultural, utilization of organic fossils to increase yield, USSR study	16078
8770	Yugoslav on execution of criminal penalties	10892	biological controls for insects and diseases, hearing	4485
8126	Criminal procedure:		commercial fertilizer used on crops and pasture in United States, 1959 estimates	16971
	code, West Germany	10816	crop production (periodical)	3386
	District Courts, rules, proposed amendments	7875	Federal reclamation projects, statistical appendix to 1963 report	16850



# INDEX 1964

	Entry		Entry
<b>Crops—Continued</b>		<b>Crustaceans—Continued</b>	
field—		Hawaiian acanthurid caligoid cope-	
and seed, production, farm use,		pods, parasitic on fishes.....	7602
etc., by States, 1962-63.....	11646	Crutcher-Rolfe-Cummings, Inc., Presi-	
labor used to produce, estimates		dent's E award for export ex-	
by States.....	9965	cellence (address).....	19349
production, safe use of chemicals.	19085	Crutchfield, James, report to Bureau	
regional analysis of production		of Commercial Fisheries on	
adjustments, historical and		Branch of Economics.....	6703
prospective, spatial linear pro-		Cruzin, hemin and hemoglobin, use in	
graming.....	1722	culture media for Trypanosoma	
seeds, acreage, yield, etc., erop		cruzi, USSR study.....	2477
years 1957-63.....	7803	<b>Cryogenics:</b>	
foreign crops and markets (period-		elastomers evaluation for potential	
ical).....	3519	use.....	15017
insecticide recommendations for		electrical properties of aluminum	
1964.....	7910	for electromagnets.....	18807
correction.....	15205	filter method produces super-pure	
plantings, prospective, 1964.....	9840	helium and helium isotopes.....	9547
prospects, Communist China.....	21262	fluids, integrated hot wire-stillwell	
Research Institute for Grains and		liquid level sensor system.....	1474
Industrial Crops, Rumania,		magnetometers applications, Hali	
activities.....	9124	effect devices.....	11402
seed crops—		metals and alloys applications, re-	
acreage, yield, production, etc..	7807	view.....	11809
forecast.....	4018	propellant feed systems for electro-	
prices.....	4019	thermal engines.....	13153
stock report.....	4020	solutions and solubilities in liquid	
tolerance to aquatic herbicides in		fluorine.....	14850
irrigation water.....	5863	systems, composite, vacuum-	
weather and crop bulletin.....	4153	jacketed tubing replaces bel-	
world summaries of statistics, re-		lows.....	14806
lease date, announcement.....	2349	tensile coupon tests of cryoformed	
see also names of crops—Rotation		AISI stainless steel pressure	
of crops.....	17	vessels at cryogenic tempera-	
Crops Research Division, CR (series)..		tures.....	21763
Crosby, Robert L., intermetallic com-		waveguide window sealed with plas-	
pounds in magnesium-rich		tic foam.....	14817
magnesium - aluminum - zir-		<b>Cryolite:</b>	
conium alloys.....	18682	minerals yearbook chapter.....	20473
Cross pollination, see Fertilization of		olivine shear strength at high pres-	
plants.....		sure and room temperature.....	19155
Cross-reference index to manual of		Cryopumping of hydrogen in vac-	
Navy officer classifications.....	11481	uum chambers is aided by cat-	
Crossett, Ark., timber management		alytic oxidation of hydrogen.....	14803
laboratory.....	8701	Cryostats, low-cost insulation system	
Crosthwaite, E. G., ground-water re-		eliminates need for vacuum.....	13180
connaissance of Sailor Creek		Cryptobiosis, studies in hypothermia	
area, Owyhee, Elmore, and	15944	and anabiosis, USSR.....	16328
Twin Falls Counties, Idaho.....	10793	<b>Crystal mixers, experimental K<sub>a</sub>-band</b>	
Croton Creek, salinity in basin.....		mixer.....	5594
Crounse, David R., Hughes micromin-		Crystalline lens, morphogenesis, prob-	
aturized instrumentation sys-		lems, USSR study.....	16152
tem.....	1728	<b>Crystallization:</b>	
Crouse, James E.:		ingots during are melting with con-	
axial-flow-pump rotor performance.	11415	sumable electrode, U S S R	
blade-element performance of axial-		study.....	5870
flow-pump rotor with tip diffu-		undercooled liquids in cylindrical	
sion factor of .43.....	18790	tubes, temperature distribu-	
Crow Reservation, land conveyances.		tion.....	15974
ratify, report.....	2185	<b>Crystallography:</b>	
Crowe super conductive memory		dislocation—	
elements, USSR.....	16326	etch pits on sodium chloride.	
CRP, community renewal program,		evaluation of etchants and	
what it is, how it may be used..	1647	techniques used to produce.....	13242
CRPL, see Central Radio Propagation		structures in single-crystal Al <sub>2</sub> O <sub>3</sub> ..	19173
Laboratory.....		structures, USSR investigations.....	1330,
CRREL, see Cold Regions Research			5295
and Engineering Laboratory.			7285
CRS, see Community Relations Serv-		studies, USSR.....	
ice.....		effects of purity and structure on	
Crude oil, see Petroleum.		recrystallization, grain growth,	
Crude petroleum, see Petroleum.		ductility, tensile, and creep	
Cruelty to children, see Children.		properties of arc-melted tung-	
Crumbley, Kenneth H., spectrographic		sten.....	21776
data from reentries of Trall-		high density graphite recrystallized	
blazer IIb.....	14880	by hot forming.....	13652
<b>Crustaceans:</b>		interaction with 2d phase particles	
caligoid copepod genus Dentigryps..	9052	USSR study.....	2839
Eucyclops serrulatus, growth and		surface topography of single crys-	
propagation in aquariums at		tals of face-centered-cubic,	
different pH values of water.....	9011	body-centered-cubic, sodium	
fossil decapod, from Marshall		chloride, diamond, and zinc-	
Islands.....	15945	blende structures.....	11404
		vacancy formation in gold under	
		high pressure.....	14894

	Entry
	Crystals:
0602	cesium iodide, fused to vacuum tube faceplates ----- 13190
	crystal chemistry of beryllium ---- 6809
9349	cubic, magnetocrystalline anisotropy, ferrimagnetic resonance relations ----- 15243
9703	fatigue and deformation, ultrasonic methods in study ----- 4223
	growth and characterization research at NBS ----- 9638, 21787
9477	ionic, ductile bending mechanism ---- 5527
	ruby, X-ray topography ----- 9682
017	single rolled molybdenum, deformation textures, etc ----- 20511
	see also Crystalligraphy.
9807	Cuatrecasas, Jose, cacao and its allies, taxonomic revision of genus Theobroma ----- 16759
547	Cuba:
474	and Soviet medicine, USSR study ----- 1270
402	Che Guevara's speech at Punta del Este, Aug. 1961 ----- 1289
809	claims of U.S. nationals against, determine -----
153	hearings ----- 17647
850	law ----- 21158
	reports ----- 17837-838
806	cold route to power, notes on Castro's Cuba ----- 2728
	consequences of 1962 crisis ----- 1323
	Cuba, Latin America and communism (address) ----- 1598
763	fishery research center ----- 12621
	liquidation of assets blocked in accordance with Cuban assets regulations, July 1963, proceeds to reimburse U.S. for expenses incurred, etc. -----
817	law ----- 21158
473	report ----- 17837
155	public health ----- 7173
	revolutionary, forensic medicine ----- 21606
803	statistics, 1963, summary ----- 18441
	trade, United States trade, 1960-63 ----- 10706
180	translations ----- 923, 2505, 2519, 2670, 2755, 2778, 2872, 2912, 4918, 4954, 5135, 5216, 5313, 6804, 6984, 7006, 7028, 7069, 7087, 7122, 7138, 7163, 7191, 7206, 7231, 7247, 8854, 8865, 8907, 8961, 8986, 9042, 9354, 9376, 9106, 9144, 9242, 10749, 10769, 10817, 10853, 10862, 10887, 10920, 10945, 10983, 11025, 11122, 11160, 11216, 12653, 12705, 12727, 12781, 12827, 12859, 12879, 12901, 12906, 12990, 13013, 13018, 14498, 14519, 14579, 14619, 14637, 16063, 16118, 16167, 16185, 16217, 16255, 16309, 16323, 16357, 16422, 16462, 16494, 16536, 18209, 18224, 18280, 18323, 18344, 18429, 18454, 18460, 18486, 19835, 19880, 19893, 19908, 19919, 19947, 19966, 19993, 20014, 20053, 20135, 20148, 20159, 20290, 20345, 20359, 20383, 21385, 21480, 21615, 21640.
	United States policy toward Cuba ----- 11621
352	United States policy toward present government, analysis of current situation ----- 11832
939	world trade, 1961-62 ----- 10742
	Cubans:
	refugee children away from home, observation of reporter ----- 13779
104	refugee problem, hearings ----- 2242, 6516
994	refugee program ----- 7847

	Entry
Cubans—Continued	
refugees, selection, security screenings, etc., for resettlement in U.S.....	2115
Cucciati, Livia, see Seralini, Livia.	
Cuckoos, Clamator, evolutionary trends.....	21869
Cucumbers, pickleworm control.....	11766
Cucurbit, pickleworm control.....	11766
Culing techniques, use in training tasks.....	13323
Culbertson, James K., fluvial characteristics and hydraulic variables, middle Rio Grande, N. Mex.....	4790
Culbertson, William C.: geology and coal resources of coal bearing rocks of Alabama.....	12508
papers in Library of Congress, register.....	5458
Culicine, see Mosquitoes.	
Culicoides, see Flies.	
Culkowski, Walter M., deposition and washout computations based on generalized Gaussian plume model.....	117
Cullen, T. M., superalloys for use in supersonic transport.....	18718
Cullen, William C., solar heating, radiative cooling, and thermal movement, their effects on built-up roofing.....	3053
Cullom, Richard R., heat-transfer analysis of thermal-energy storage for solar direct-energy-conversion systems.....	9569
Culture:	
cultural relations, agreement with USSR.....	15118
culturally different youth, improving English skills.....	2274
educational and cultural diplomacy, 1962.....	3145
educational and cultural exchange program of State Department, American grantees, 1963, list.....	15096
exchange program, agreement with Liberia.....	15122
exchange programs, planning and development, key contacts, interagency directory.....	15098
exchanges, State Dept. foreign visitor programs, objectives, etc.....	7768
in technological age (remarks).....	843
influence on children, research programs, studies in progress.....	17120
international information and cultural series.....	3145, 7768
international meetings, world list.....	4168
United States cultural and artistic exchanges, hearings.....	2112
see also civilization.	
Cultures and culture media, see Bacteriology.	
Culvert pipe, see Pipe and pipe fittings.	
Cumberland Plateau, burning does not control young hardwoods on shortleaf pine sites.....	14308
Cumberland River and Valley: floods, magnitude and frequency.....	4816
surface water records of basin, Oct. 1950-Sept. 1960.....	15939
Cumings, Roy E., electrorefining of columbium.....	18689
Cummings, Larry L., personnel management.....	11607
Cupps, Cecil Q., areal variation in reservoir oil characteristics, etc., Wyo.....	9507
Cupric ferrite, see Copper ferrite.	
Cups, disposable industry as related to area redevelopment.....	11825
Curcio, J. A., transmission of ruby laser light through water.....	5597

# INDEX 1964

	Entry		Entry
Curecanti pluton, unusual intrusive body in Black Canyon of the Gunnison, Colo.	4780	Customs, <i>see</i> Tariff.	
Curing of food, <i>see</i> Ham.		Customs Bureau, deficiencies in customs control over unloading of bulk petroleum, GAO report.	10593
Curl, Peter V., American foreign policy, current documents.	11614	Customs Court: cases adjudged—	
Curley, Thomas J., copper industry report, annual, 1964.	15298	Customs Court report.	8400, 21246
Currency, <i>see</i> Money.		Treasury decisions.	4094
Current construction reports, announcement and order form.	13747	Customs districts, by continent, U.S. airborne foreign trade, summary report.	4110
Current discharge at selected stations in Pacific Northwest.	4058	Customs Service, 175th anniversary (remarks).	7822
Current export bulletin.	3389	Customs Year, <i>see</i> United States Customs Year.	
Current fishery statistics, CFS series.	691-695, 2334-35, 6698-6701, 8592-98, 10547-552, 12414-422, 14263-266, 15912-915, 17994-996, 19714-720.	Cutler, Sidney J.: end results of cancer therapy.	21792
Current industrial reports.	160-168, 189, 1809-19, 3390-91, 3706, 4347-48, 6030-46, 8110-21, 10048-61, 11892-904, 13750-761, 15308-313, 17088-103, 19290-297, 21028-34.	Cutright, Clara H., transportation, bibliography.	9982
Current projects on economic and social implications of science and technology, 1963.	14987	Cutthroat trout, <i>see</i> Trout.	
Current retail trade reports.	3392-94, 13767	Cutting of metal, <i>see</i> Metal cutting.	
Currents, <i>see</i> Electric currents—		Cutts, Warren G.: reading unreadiness in the underprivileged.	6577
Ocean currents.		research in reading for middle grades, annotated, bibliography.	599
Curriculum:		teaching young children to read.	10474
chemical technology, post high school.	21263	Cuyahoga County, Ohio: relief—	
colleges and universities, oceanography 1963-64.	8538	law.	17361
electrical and electronic technologies, determining courses of study.	10466	report.	6475
electronic data processing in engineering, science, and business, suggested techniques for determining courses of study.	8481	Cuyuna Range, iron phyllosilicates.	9511
high school subjects, offerings and enrollments, 1960-61, summary.	14198	CVTR, <i>see</i> Reactors (atomic).	
Industrial arts courses, grades 7-12, preliminary report.	17916	Cyanogen:	
Industrial arts need.	4652	composition and thermodynamic properties of products of cyanogen-oxygen combustion.	18753
manpower development and training program, electronic business data processing peripheral equipment occupations.	19631	compounds, radiation protecting action, USSR study.	20416
materials for trade and industrial education, list.	8479	Cybernetics:	
music, guides.	19632	and anti-religion, USSR study.	20259
science courses, written materials, films, mathematics, science, engineering, studies supported by National Science Foundation.	20668	applications in medicine, USSR study.	9128
Curry, R. L., manufacturing aggregate by nuclear methods.	17959	applying in psychiatry, USSR study.	12716
Curtis, E. S., balanced jets in ground proximity.	3174	approach to problem of image, USSR study.	16439
Curtis, James D., what do you mean, site preparation.	14318	Bulgarian study.	5277
Curtis, Marjorie, relief.	14046, 17173	chemical, simulation and control, USSR study.	18331
Cushing, E. M., general geology of Mississippi embayment.	12511	classroom role, USSR studies.	7004
Cushioning materials, for harvesting and handling fruits and vegetables.	13567	complex systems, problems, USSR studies.	11015
Cushman, Robert V.: ground-water resources of north-central Connecticut.	8782	contemporary scientific knowledge development, USSR study.	2064
water resources of Hartford-New Britain area, Conn.	10649	control of reversible hypothermy process, USSR study.	11124
Custer Battlefield National Monument, general information.	13298	cybernetics and development of sciences, USSR study.	16392
Custer County, S. Dak., Jewel Cave SW quadrangle, geology.	2411	cybernetics and economic management, Czechoslovakian study.	20302
Custodians, handbook, civil defense emergency hospital.	15053	cybernetics and electronic computer technology, USSR study.	5113
		cybernetics and medicine, USSR study.	2557
		cybernetics and nervous system, Rumanian study.	7010
		cybernetics and reliability, USSR study.	7051
		cybernetics and religion, USSR study.	20418
		cybernetics in chemistry, USSR study.	4950
		cybernetics in sciences, engineering and economy, East German study.	5245
		Czechoslovakia.	954
		Czechoslovakia, conference.	2767
		development problems, USSR study.	6908
		developments in Ukraine, USSR study.	2713
		East European scientific abstracts.	21393

	Entry
<b>Cybernetics—Continued</b>	
essays, USSR study	7330
higher order of cybernetic machines, USSR study	18230
image, mental reflection in light of ideas of cybernetics, USSR study	7146
informational concepts, Rumanian study	5031
mathematical problems of cybernetics and computer technology, USSR study	20269
mathematical problems, USSR studies	7053
military application, USSR study	7100
military, origin in foreign countries, USSR study	18360
models, description	1061
Moscow in May 1963, education and cybernetics	17918
new science, philosophical analysis, USSR study	16429
pedagogy and communications, USSR study	6963
philosophical and sociological problems, USSR study	5128
physiological interrelationship, philosophical problems, USSR	5374
planning and social progress, USSR study	18366
possible and impossible in, USSR study	18504
problems in field of archives documentation, USSR study	20340
problems, USSR studies	8974, 19870
role in studying workings of brain, USSR study	5136
science of optimum control, USSR study	20110
Soviet ideas on interrelationship of people and machines	10850
teaching machines and programmed instruction	12890
teaching machines, use, Bulgarian study	18196
technical developments, USSR studies	2556, 2592, 11156, 4962, 8847, 14510, 19865
technical, USSR news	
thought functions, possibility of modeling, USSR study	2553
use in medicine and physiology, USSR	2745, 9023
uses in medicine, present and future, USSR study	4961
USSR scientific abstracts	21388
variation problems and fluctuation escape, Soviet papers	16430
see also Biocybernetics.	
Cyclohexane, interaction with surface of metallic catalyst, USSR study	14456
<b>Cylinder pressmen, see Pressmen.</b>	
<b>Cylinders:</b>	
blunt-nosed, hypersonic flow fields, parametric study	14875
blunted cylinder-flare configuration, ablation, flight investigation to Mach number of 8.48	14884
buckling, influence of prebuckling and stresses	7561
case extrusion, procured from Wyman-Gordon Co. by Bendix Corp. under AEC cost-type contract, unwarranted inclusion of tooling costs in price, GAO report	10625
coaxial permeable, calculating motion of electrically conductive gas in magnetic field	20628
mating, kinetic-energy absorber employs frictional force between surfaces	13188

	Entry
<b>Cylinders—Continued</b>	
multiple body concentric configurations, neutron self-shielding factors	20572
ogive, boundary-layer velocity profiles and skin friction drags due to surface roughness	3023
orthotropic, instability in axial compression, influence of ring stiffeners	21775
sandwich construction, classical buckling in axial compression	8639
shell, liquid-filled, equations of axially symmetric vibrations	14924
slotted antennas equatorial patterns in plasma environment	7544
stiffened, large-diameter, susceptible to general instability, bending tests	9589
thick wall, subjected to radial pressures and axial strain	16640
thin-walled pressurized, vibration characteristics of circular type, NASA report	7555
<b>Cyprus:</b>	
Army area handbook	19210
evacuation of dependents of Armed Forces, payment of expenses, authorize—	
hearing	19591
law	19421
reports	13937, 19563
sailing directions	7632
<b>Cysteine:</b>	
influence on damage to seed during irradiation, USSR study	2515
radioprotection with AET-cysteine in rhesus monkey	19179
<b>Cystic fibrosis, see Fibrosis.</b>	
<b>Cytochemistry:</b>	
cytochemical properties of interphase cell nuclei with different physiological functions, USSR study	988
marine organisms, early stages, USSR studies	4901
<b>Cytology:</b>	
animal and plant cells, USSR studies	7201
cell resistance, pharmacological regulation problems, scientific conference, USSR	21401
cell substances, changes after injury and excitation, USSR data	1148
control of cell division and induction of cancer symposium	13285
intracellular inclusions in hereditary amyotrophic lateral sclerosis, USSR study	9297
intra-vitam staining of cells, USSR study	12675
nerve cells, nuclear membrane potential, USSR study	11227
oral exfoliative, Veterans Administration cooperative study, 1962	7828
radiosensitivity of tissues of mammals, USSR study	5092
role in development of medicine, USSR study	1220
scientific world outlook, USSR study	5333
Soviet journal, report from editorial board	21466
television microscopy in cytopathology	3114
USSR, recent studies	7248, 16102
USSR scientific council, proceedings of 1st session	14538
Cytomorphological study of female gonads of Coelenterate polypodium hydriforme, USSR	1153
Cytotoxins, cytostatic substances in chemotherapy, USSR studies	18550



# INDEX 1964

Entry	Entry
Czarnecki, K. R. : boundary-layer velocity profiles and skin friction due to surface roughness on ogive cylinder effects of compressibility and heat transfer on laminar sublayer of turbulent boundary layer--	3023 20584
Czechoslovakia : claims program, completion, report-- cybernetics cybernetics, conference-- East European legal journals, abstracts economy in 1963 financing agricultural enterprises in State agricultural sector and uniform agricultural co- operatives foreign trade, 1948-62 index-digest of decisions, 1949-62 labor force, scope and concepts medical sciences and public health, research plan, 1964-65 moldavites from Bohemia and Moravia, study postgraduate medical training development in Slovakia provincial press, summaries scientific cooperation with USSR-- Slovak Academy of Sciences, achievements in past 10 years Soviet and Czech scientists, co- operation	10584 954 2767 907, 1193, 4893, 5404, 9151, 10831, 10974, 12937, 16091, 16270, 18497, 20164. 2640 10857 6859 19745 10070 1203 5530 20232 905, 906, 1042, 1098, 1126, 1260, 2514, 2649, 2777, 2867, 4890, 5072, 5121, 5194, 6916, 7018, 7132, 7199, 7328, 8858, 9051, 9135, 9202, 9286, 10774, 10840, 10948, 11066, 11188, 12619, 12746, 12846, 13003, 14448, 14601, 14649, 16072, 16181, 16257, 16341, 18425, 18470, 19884, 19986, 20044, 20356, 21380, 21432, 21617. 6987 10922 7227
<b>D</b>	
D.C. Transit System, Inc. : franchise act, amend-- law reports-- D.H.I.A., see Dairy herd improvement associations. D.S.A., see Defense Supply Agency, nomination, hearing-- Dane, J. Dewey : remarks-- Sept. 30, 1964 Oct. 10, 1964 Dahms, Walter G., gross and net yield tables for lodgepole pine-- Dahomey : economy, basic data foreign trade regulations-- Dalboch, Alfred F., foreign trade regulations of Equatorial Customs Union and Camerooon-- Dairy cattle, see Cattle. Dairy herd improvement associations : DHIA cow index list, registered progeny of AI sires, July- Nov. 1963 national cooperative program-- sire summary lists-- Dairy industry, see Dairying. Dairy plants, see Dairying.	1941 380, 481 19704 19707 8686 10701 14383 21073 9917, 13569 3403 5798, 9918, 13568, 20899
Dairy products : foreign trade prospects handling in retail food stores-- manufactured products, 1963-- market statistics, 1963-- statistical summary, 1963-- see also names of products. Dairying : dairy-herd-improvement letter, national cooperative improvement program dairy plants approved for USDA grading service, lists-- dairy situation (periodical)-- drive-in dairies in central California, development, organization, and operation flexibility of operation in dairy manufacturing plants, changes, 1944-61 foreign agriculture circulars-- pasture season, 1963-- publications, price list-- statistics through 1960, supp-- Dakan, Norman E., intelligence, supp. 1, PACAF basic bibliographies-- Dalata, Sonja, relief-- Dalaynor, Lake, zoobenthos and nutrition of benthophagous fish, Chinese People's Republic-- Dale, Edgar : stories worth knowing workbook, know your English-- Dale, R. H., story of ground water in San Joaquin Valley, Calif-- Dalgarno, A., planetary physics, photolization of atomic oxygen-- Dallas, Tex. : occupational wage survey-- principal electric facilities, map-- Veterans Administration regional office move, GAO report-- The Dalles Dam : fish passage report-- 1962 1963 Dalrymple, Dana G., processing plant feasibility, bibliography-- Dalton, Beverly J., application of least squares to PVT data on gases Dalton, Charles C., tolerance limits for meteoroids hazard to space vehicles Dalton, Leonard M., relief-- Dalzell, John F. : midship bending moments-- Mariner type ship-- summary of investigation-- tanker and destroyer-- Damages, see Claims. D'Amico, Louis A. : changes in number of faculty members in same 1058 institutions of higher education, by rank and length of contract, 1960-61 and 1962-63 changes in tuition charges to full-time undergraduate students, 1958-63 financing higher education-- variations in tuition and fees charged, denominationally affiliated institutions, 1962-63-- Dampers, shock isolator, synthesis-- Damping : in pitch, blunted cone, effect of changes in base contour-- liquids right-circular cylindrical tanks including effects of time-variant liquid depth, investigation, errata-- viscous, liquid sloshing in spherical tanks	8628 16957 16885 7948 7805 3403 4181, 15184 3404 1707 21258 3520 1624 9709 1720 5892 15448 5001 554 555 18115 14779 7404 678 2404 613 17936 14236 16626 7497 6242, 13848 7726 7728 7727 17911 10458 14185 10475 13149 1472 3005 1459

	Entry		Entry
Dams:		Davey, Stuart P., effects of chemicals on earthworms.....	8624
embankment-shaped weirs, discharge characteristics.....	6813	David, Lily M., recent collective bargaining and technological change.....	13046
flooding of Indian lands, prevent before provision made for relocation of Indians, report.....	15502	David Taylor Model Basin, report.....	13438
small, design techniques, errata.....	1573	Davidson, John:	
studies of flow of water over dams and weirs (series).....	6813	C-130E category 2 performance test.....	5880
see also names of dams or bodies of water.		H-21B sideward takeoff test.....	7970
Danahoe Refining Co., petition for adjustment assistance.....	18994	Davidson, Katherine H.: preliminary inventory of records of Smaller War Plants Corporation.....	20633
Dancers, occupations, employment outlook.....	7380	records of Bureau of Census.....	20634
Dancing:		Davidson, Walter B., relief.....	450, 1885
Iroquois music and dance—departmental edition.....	9992	Davies County, Mo., soil survey report.....	16865
document edition.....	10154	Davis, Albert B., tobacco production and marketing in Southern Rhodesia, Northern Rhodesia, and Nyasaland.....	14291
Danger areas, Pacific Ocean danger areas, DAPAC.....	18844	Davis, Cereida J., dairy statistics, 1962 supp.....	1720
Daniel, Alexa, relief.....	17482	Davis, Donald R., bagworm moths of Western Hemisphere.....	13295
Danil'chenko, Pavel T., obituary.....	9200	Davis, G. H., use of ground-water reservoirs for storage of surface water in San Joaquin Valley, Calif.....	6814
Danko, Joseph C., thermoelectric heat exchanger demonstration unit.....	8089	Davis, Grant, second-year results of hybrid poplar test plantings on bituminous strip mine spoils in Pennsylvania.....	14321
D'Anna, Philip J., self-sealing structures for control of meteoroid hazard to space vehicles.....	21733	Davis, Harry E., digest of 50 selected health and insurance plans for salaried employees, spring 1963.....	9454
Dannenberg, R. O., beryllium solvent extraction of Spor Mountain, Utah ore.....	14751	Davis, Hugh T., soil survey report, Spalding County, Ga.....	21879
Dansby, William L.: occupational wage survey—Little Rock-North Little Rock, Ark.....	1380	Davis, J. R., use of hf lunar reflection circuit in study of ionospheric electron density.....	5609
Memphis, Tenn.....	11276	Davis, James B., DAP fire retardants.....	2376
Raleigh, N.C.....	2963	Davis, Jeanne M.: farm vacation enterprises in Ohio. New England farm vacation businesses, characteristics and owners' experiences.....	14168
DAP, see Diammonium phosphate.		Davis, L. E.: mineral industry of—California.....	2984
DAPAC messages, danger areas in Pacific.....	18844	Nevada.....	11317
D'Aquanno, Guiseppa, and children, relief.....	15424, 17218, 17680	Davis, Robert T.: safety organization and activities of award-winning companies in coal-mining industry.....	16625
Darbro, Blanton, and wife, relief.....	15629, 17185	water supply outlook and Federal-State-private cooperative snow surveys for Washington.....	4144
Darlen, Isthmus of, see Panama, Isthmus of.		Davis, Theodore E., radioactive waste processing and disposal.....	19244
Darling, Eugene M., Jr.: errors in geographic referencing of Nimbus cloud pictures.....	5520	Davis, Walter V., effect of ancillary personnel on treatment capability of USAF dental officer.....	70
geographical grid for Nimbus cloud pictures.....	9576	Davis-Bacon act, see Government contracts.	
Darling, Richard C., testimony, hearings.....	6526	Davis-Bacon Appeals Board, create, hearings.....	21205
Darling, Richard L.: public school library statistics, 1962-63.....	21269	Davis Dam, general information.....	13431
school library services for culturally deprived child.....	601	Davis Dam powerplant, general information.....	13431
survey of school library standards.....	17927	Davis Stralt, sailing directions, change.....	9073
Darrow George M., strawberry varieties in United States.....	20912	Davison, Elmer H., micrometeoroid satellite (Explorer XVI), stainless-steel penetration rate experiment.....	18772
Data, see subjects.		Dawson County, Ga., Georgia Nuclear Laboratory, infiltration and permeability of weathered crystalline rocks.....	8753
Data processing, see Electronic data processing systems.		Day, Richard E., civil rights U.S.A. public schools, Southern States, 1963, North Carolina.....	15347
Daughters of American Revolution, National Society of, see National Society of Daughters of American Revolution.			
Daughters of the Confederacy, United, see United Daughters of the Confederacy.			
Dauman, Alexander: basic data on economy of France.....	8818		
market factors in Switzerland.....	10699		
Davenport, Edwin E., transition characteristics of VTOL aircraft powered by 4 ducted tandem propellers.....	9603		
Davenport, Elizabeth, calculating nutritive value of diets.....	20902		
Davenport, Iowa, occupational wage survey.....	7401		
Davey, J. L., germanium heated to temperatures in evaporation range.....	5607		

# INDEX 1964

	Entry
Day care of children :	
day care for other people's children	
in your home.....	19311
fees for services.....	4357
determining.....	15331
migrant children health needs,	
Kansas program.....	9717
national need (address).....	8787
what is good day care? general	
information.....	21040
your child in family home.....	21043
Day-haul practices, <i>see</i> Farm labor.	
Days, <i>see</i> names of special days.	
Dayton, R. W., reactor materials, re-	
view of recent developments....	3961
Dayton, Ohio, occupational wage sur-	
vey.....	11281
DCA, <i>see</i> Defense Communications	
Agency.	
DDT :	
and DDE residues in soil of aerial	
test circle.....	14329
chronic effects on cutthroat trout,	
persistence on sweet corn as deter-	
mined by gas chromatography....	13564
Dead :	
deceased personnel, identification,	
technical manual.....	8042
transportation of deceased de-	
pendents of members of Armed	
Forces, report.....	10252
Deaf :	
captioned films for deaf, catalog....	572
.....	12320
Conference on Collection of Statis-	
tics of Severe Hearing Impair-	
ments and Deafness in U.S.,	
1964.....	20650
driving and employability, symposi-	
um.....	9871
Federal programs.....	10463
hearing loss, hope through re-	
search.....	11557
people and their difficulties....	5747
.....	16910
Deaf, Convention of American In-	
structors of, <i>see</i> Convention of	
American Instructors of the	
Deaf.	
Deaf, International Congress on Edu-	
cation of, <i>see</i> International	
Congress on Education of the	
Deaf.	
Deafness, <i>see</i> Deaf.	
Dealers :	
automotive employee earnings.....	11275
commercial seed and planting stock,	
directory.....	791
livestock, how packers and stock-	
yards act applies.....	5788
subject to certain sections of title 1,	
National housing act, list.....	4692
turkeys, national improvement plan,	
participants.....	5797
Dean, Arthur H., address, Aug. 18,	
1964.....	17165
Dean, Karl C. :	
dissolution and roasting techniques	
for extracting cesium from pol-	
lucite ores.....	9505
floatation of calcareous scheelite	
ores.....	9503
Dean, Stuart E. :	
nongraded schools.....	19635
public elementary school approval	
and accreditation.....	14192
Deans, Edwina, space-oriented mathe-	
matics for early elementary	
grades.....	19625
Death :	
accidental, statistics.....	15040
age-adjusted and age-specific rates	
for malignant neoplasms,	
1960.....	15041
cancer mortality patterns, uranium	
miners and millers, 1950-62....	15044

	Entry
Death—Continued	
cardiovascular disease, 1960 data	
on national and State experi-	
ence.....	5647
causes, international statistical	
classification, revision consid-	
erations.....	9727
change in mortality trend in United	
States.....	7705
Chile, recent mortality trends....	9732
clinical, reviving organism, USSR	
study.....	1267
CVR disease mortality in Califor-	
nia, recent changes.....	11570
early infant, Zhukovskiy, RSFSR....	21552
infant and childhood mortality	
trends, 1961.....	21045
infant mortality, lags in reducing...	13536
morbidity and mortality weekly re-	
port.....	3754
mortality by occupation and indus-	
try, title page and contents,	
v. 53, nos. 1-5.....	3116
mortality statistics, 1950, compar-	
ability for 5th and 6th revisions	
of International lists of	
diseases and causes of death....	1568,
.....	7710
perinatal mortality, means of reduc-	
ing, USSR study.....	21587
records, where to write.....	11586,
statistics.....	20772
.....	3115, 9735, 7707, 7709
Death Camas, livestock poisoning in	
Western States, reducing	
losses.....	20915
Death gratuity, <i>see</i> Gratuities.	
Death Valley National Monument,	
geologic and hydrologic recon-	
naissance of Furnace Creek	
Wash., Calif.....	21361
DeBald, Paul S., Minnesota's timber	
volume.....	12461
Debates and debating :	
college topic 1964-65, selected ex-	
cerpts and references.....	19450
high school and college annual to-	
pics, preparation and printing	
of compilations of materials—	
law.....	4420
reports.....	2102, 2200
high schools, 1964-65.....	12167
De Blas, Domenic A., thyroidal in-	
fluence on altitude tolerance....	5908
Debts, <i>see</i> Banks and banking.	
DeBoer, Lloyd M., national directories	
for use in marketing.....	13441
Debt :	
enlisted members of Armed Forces	
and Reserve components, per-	
mit cancellation, report.....	13941
farm mortgage debt.....	2265
home mortgages and financing ac-	
tivity.....	3446
non-real-estate farm debt owed to	
nonreporting creditors, etc., re-	
vised estimates, 1949-64.....	17906
<i>see also</i> Public debt.	
DeButts, Henry M., address, Aug.	
11, 1964.....	15333
DeCarlo, J. A., coke and coal chemi-	
cals.....	21686
DeCarlo, Vincent J., cometary astro-	
physics.....	14772
Decay (physics) :	
satellite launch 1963-21, prediction,	
using naval space surveillance	
system observations.....	20712
Decay (radioactive) :	
new type, USSR study.....	9270
<i>see also</i> Beta decay	
Decay (timber) :	
in trees, list of publications.....	6740
Decay of strong plane shocks in ideal	
gas.....	20528

	Entry
Deceased, <i>see</i> Dead.	
Decedents' estates, District of Columbia code, pt. 3, enact, report...	15484
Deceleration:	
human survivability of extreme impacts in free-fall.....	1791
plasma expanding in vacuum in presence of magnetic field.....	16733
Deception, <i>see</i> Camouflage.	
Dechaeue, R., low-stress brittle fracture in mild steel.....	5677
Deciduous tamarisk, <i>see</i> Tamarisk.	
Decimal classification, <i>see</i> Classification.	
Decision-making:	
Bayesian learning processes.....	64
optimal strategies and human behavior in fungus-eater game 4.....	11798
utility, induced utilities and small worlds.....	63
Decision Sciences Laboratory, biennial progress report, July 1962-June 1964.....	20957
Decisions, <i>see</i> names of courts, etc., rendering decisions—also subjects.	
Deckert, Wallace H., large-scale wind-tunnel tests of descent performance of airplane model with tilt wing and differential propeller thrust.....	20579
Declaration of Independence:	
text.....	17447
print as House document, report.....	8423
Decomposition:	
cellulose by <i>Aspergilli</i> .....	7951
thermal, human waste, gross chemical changes.....	7985
Decompression sickness, <i>see</i> Aeroembolism.	
Decontamination:	
individual protective materials and protective coatings, USSR, study.....	20419
waste waters from radiochemical laboratories, etc., USSR study.....	20366
Decorating, apprenticeship and training standards.....	20978
Decoration and ornament, glass plastics and plasticized wood, USSR industrial development.....	16252
Decorations of honor:	
foreign, acceptance by retired U.S. Government personnel, reports.....	17474
Yugoslavia, law on changes and supplements to law on decorations.....	21235
De Corps, Consuelo A., relief.....	12933
Decey trap for blackbirds and starlings.....	6265
Deductions, <i>see</i> Income tax.	
Deep sea domestic waterborne traffic.....	14275
Deer, browse resources of north Georgia.....	4874
Dees, Lola T., Fish and Wildlife Service papers on physical and chemical oceanography, 1940-62, list.....	14400
Defects of press castings and methods for their prevention.....	80
Defenders, Public, <i>see</i> Public defenders.	
Defense, <i>see</i> Civilian defense—National defense.	
Defense agencies, <i>see</i> Government offices.	
Defense communications, <i>see</i> Military communications.	
Defense Communications Agency, DCA circular.....	6586

	Entry
Defense contracts, <i>see</i> Government contracts.	
Defense Department:	
action in excessive procurements and redistributing aircraft spare parts programed for or delivered to Portugal under military assistance program, GAO follow-up review.....	18088
appropriations, 1964—	
deficiency, hearings.....	10285
hearings.....	2104
public works—	
law.....	1984
reports.....	343, 510, 4458
supplemental, proposal.....	10162
appropriations, 1965—	
hearings.....	6337, 8358, 10287, 14125
law.....	17305
reports.....	10209, 15533, 15698
military procurement—	
hearings.....	6344
law.....	8227
reports.....	6282, 6289, 6319, 6469
arms control and disarmament, research and studies, report.....	11833
Assistant Secretary, nomination of—	
Bundy, William F., hearing.....	522
Fubini, Eugene G., hearings.....	521
Horwitz, Solis, hearing.....	14127
cataloging and standardization program, semiannual, report.....	10298
cataloging handbook H series.....	558-559, 2251, 3468-78, 3493-95, 3497-99, 12288-297
cataloging manual M (series).....	10444, 21240
contract with Lockheed Missiles & Space Co., use of private executive rather than commercial aircraft, unwarranted charges, GAO report.....	21345
contractor employees, cost of morale and recreation benefits—	
committee print.....	21200
hearings.....	17632
contractors, equal employment opportunities—	
hearings.....	8394
report.....	8336
contracts, insurance on inventories held by contractors, unnecessary costs, GAO review.....	19767
cost reduction program, report 1964.....	15828
cost reduction report.....	8376
departmental public information offices, excessive costs resulting from separate operation, GAO report.....	8720
excessive costs of duplicating automatic teletype switching centers, GAO report.....	8719
excessive cost to Government in sale and lease-back of electronic data processing system by Aerojet-General Corporation, Sacramento, Calif., GAO report.....	21835
excessive prices negotiated for storage of petroleum, GAO report.....	19755
excessive relocation payments to employees transferred from one company location to another by Lockheed Missiles & Space Co., Sunnyvale, Calif., GAO report.....	12490
failure to curtail operation of commissary stores, GAO report.....	10627
fallout shelter program.....	21046
Federal manual for supply cataloging, format and content.....	10444



# INDEX 1964

	Entry
Defense Department—Continued	
follow-up review of action to obtain reimbursement from foreign countries for administrative expenses under military assistance program, GAO report.....	8721
handbook DSAH series.....	560, 4598 6540-42
impact of military and related civilian supply and service activities on economy, hearings.....	13916
incentive contracting guide.....	6544
jet aircraft engines, overprocurement of selected accessories by military services, GAO report.....	2402
manpower utilization in financial management functions, report.....	12079
manual DSAM series.....	4600, 12298, 21252
military and civilian personnel, labor cost, control, hearings.....	17661
military construction and family housing, appropriations, 1965—	
hearings.....	15795, 12118
law.....	17434
reports.....	12059, 12061, 15772, 17604
military construction appropriations, 1964, hearings.....	517
military construction authorization 1964, law.....	254
1965—	
hearings.....	6345, 12252
law.....	17249
reports.....	6334, 8289, 14053, 15487
military handbooks.....	561, 4604, 10447, 12303, 14162-163, 19615-617.
military standards.....	562-563, 4606-7, 6547, 8466, 10448-450, 12304, 14164, 15823, 21255.
payments to Army and Air Force reserve officers on annual active duty training for days on which no training or travel was performed, GAO report.....	10612
personnel to administer military assistance program, inefficient utilization in advanced western European countries, GAO report.....	8724
petroleum storage, excessive interest expense, price negotiated with New England Tank Industries of New Hampshire, Inc., GAO report.....	6765
procurement and supply management, unnecessary costs for electronic items, GAO review.....	19758
purchase of leased automatic data processing components, GAO report.....	6781
regulations DSAR series.....	12300
report, 1963.....	17896
satellite communications, military—civil roles and relationships.....	19510
specifications and standards, index.....	19614
supplement.....	3586
standardization documents, supply classification listing.....	3496, 19613
standardization manual M (series).....	2252, 4049, 15827, 21250-251
standardization policies, procedures, etc., manual.....	2252, 4049, 15827, 21250-251
surplus personal property—	
classes sold.....	6538
how to buy.....	15831
teletype equipment leasing, unnecessary costs, GAO review.....	12495
TFX contract investigation, hearings.....	4584
uneconomical management of commercially available items, GAO report.....	2405

	Entry
Defense Department—Continued	
unnecessary costs as result of Navy's refusal to accept standardized dress shoes, GAO report.....	2407
unnecessary cost in purchase and use of paint products in uneconomical-size containers, GAO report.....	18094
unnecessary cost of leasing electronic data processing systems by—	
Aerospace Division, Martin Marietta Corporation, GAO report.....	8735
Bacchus Works, Hercules Powder Company, GAO report.....	19763
Boeing Company, GAO report.....	10618
Continental Aviation and Engineering Corporation, GAO report.....	10622
General Electric Co., Light Military Electronics Dept., GAO report.....	18095
unnecessary procurement, etc., Sidewinder missile training systems under military assistance program, GAO report.....	8740
winning cold war, U.S. ideological offensive, hearings.....	8382
Defense disposal manual.....	4600
Defense Fuel Supply Center, excessive prices negotiated for storage of petroleum, GAO report.....	19755
Defense Information School, Fort Slocum, N.Y., mission (address).....	20984
Defense Intelligence Agency, building location at Arlington Hall Station, hearings.....	12122
Defense Logistics Services Center, DSA-DLSC handbook.....	12301, 21253-254
Defense procurement circular.....	6539
Defense production, see Production.	
Defense production act, see Production.	
Defense Production Joint Committee, report.....	4462
Defense Supply Agency:	
civilian career program for transportation.....	21252
DSA-DLSC handbook.....	12301, 21253-254
equal employment opportunity.....	14160
handbook DSAH series.....	560, 4598, 6540-42
headquarters, organization, missions, and functions.....	4602
how to do business with DSA.....	6543
HQM series.....	4602
introduction to, general information.....	4603
manual DSAM series.....	4600, 12298, 21252
MILSTRIP, military standard requisitioning and issue procedures manual.....	10451, 12300, 19618, 21256
procurement regulation, revision.....	3411
regulations DSAR series.....	12300
small business participation in Government procurement, 1963, conference.....	12283
traffic management handbook.....	6540
Defense traffic management handbook.....	6540
Definitive designs for naval shore facilities.....	1669, 17728
Defoliants, development and study, USSR conference, report.....	21507
Deformations (mechanics):	
borehole deformation gage, device for placing in horizontal hole.....	21714

# JANUARY-DECEMBER

Entry	Entry
Deformations (mechanics)—Continued	Delaware—Continued
collision of deformable bodies and modeling of process, USSR study	climatic summary 1951-60, decennial census
20028	20877
cylinders, influence of prebuckling deformations and stresses	climatological data
7561	3329
determination in flexible plates and shells by method of photoelastic coatings	electric rate book
14925	4705
displacement of deformable body in acoustic medium, USSR study	fishery products, wholesale dealers, list
2712	709, 18010
metals, in relation to temperature, USSR studies	labor organizations, reporting, register
20072	16570
requirements, civil air regulations amendment	land conveyance within Fort Miles Military Reservation—
10667	hearing
rock deformation apparatus, application of induction heating to	law
13631	reports
see also Plasticity.	2071, 2209
Deformities, congenital heart defects	mineral industry, minerals year-book chapter
20753	20488
Degasification, removing methane from Pocahontas coalbed in southern West Virginia	municipal waste facilities, 1962 inventory
1443	3102
De Gaulle, Charles, Reynaud book on De Gaulle foreign policy, French review	municipal water facilities
11005	18907
Degrees (colleges, universities, etc.): advanced—	precipitation data, hourly
fall 1961, enrollment	3578
fall 1962 survey of enrollment, summary	women—
609	labor laws, summary
fall 1963, students enrolled, summary report	11723
15857	legal status, addendum
conferred, 1962-63, summary	9890
17926	workers, 1960
diplomas issued by foreign institutions of higher education, decree on acceptance, Hungary—	7866
7251	Delaware Bay:
earned by field of study and level projected to 1975—	hurricane survey, engineer report—
14181	departmental edition
earned 1901-62, comparisons with projections to 2000—	document edition
7618	17942
earned degrees conferred, 1960-61	17467
2269	Delaware & Hudson RR, accident—
8478	Delaware River and Valley:
engineering, 1963, advance report—	aerial radiobiological measuring survey, ARMS-2, of Camden-Delaware Valley area
home economics, 1961-62—	111
4623	hurricane survey, engineer report—
Hungarians awarded candidates and doctor's degrees, Oct. 1963, list	departmental edition
8849	document edition
Hungary, new doctors and candidates, list	2422
16223	streamflow characteristics and environment in region
Ph. D. output in scientific fields at leading institutions, 1961-62 and 1962-63—	water pollution control and abatement in basin, hearing—
20651	17652
United States institutions, 1961-62, number and kinds of earned doctor's degrees awarded	19803
19636	water quality, Trenton, N.J.
De Groot, Paul, differences in world Communist movement, International	water supply characteristics of streams in basin
1283	824
DeHuff, Gilbert L.: columbium and tantalum—	Delaware River Basin Commission: appropriations, 1964—
18662	law
ferroalloys	public works—
20472	law
manganese	reports
20485	1984
silicon	343, 510, 4458
18707	appropriations, 1965—
vanadium	hearings
18713	12119
Deismology, see Earthquakes.	reports
Deits, Glenn C., and others, relief	12098, 15767, 17572
15644, 17203	Delaware River Joint Toll Bridge Commission, compact, consent of Congress to supplemental agreement, report—
de la Cierva, Juan, high-performance electrostatic discharger for helicopters	346
13493	Delaware River Port Authority: compact concerning, consent of Congress—
de Laguna, Wallace, chemical quality of water, Brookhaven National Laboratory and vicinity, Suffolk County, N.Y.	hearing
19772	4505
Delaney, William F., labor law and practice in Turkey	law
5430	reports
Delaware: annual survey of manufactures, 1962, statistics for States, standard metropolitan statistical areas, and large industrial counties	2087, 2187, 12210
6029	Del Baglivo, Anna, relief
	2018
	De Leon, Wilfredo L., relief
	15423, 17217, 17679
	Del Frate, Pietrina, relief
	451, 6251
	Delicatessen fish products
	2339
	Delinquency, see Juvenile delinquency.
	Delinquent children, see Juvenile delinquency.
	Dellner, Lois T., optimized printer plotting system
	11383-884
	Delsordo, James D., protective case-work for abused children
	4363
	Delta (ocean station), see Weather stations.
	Delta wings, see Wings (aircraft).
	Demale, Fred A., convective and radiative heating of shapes entering atmospheres of Venus and Mars
	3026
	Demand, see Supply and demand.

# INDEX 1964

Entry	
Demars, Clarence J., predicting insect-caused damage to Douglas-fir seed from samples of young cones	18072
De Medeiros, Leonor do Rozario, relief	8272, 15669, 17225
Demeter, Joseph J., self-generated carbon-expanded iron catalyst for synthesis of methane	11331
Demineralization of saline water, <i>see</i> Water.	
Democracy:	
Latin America, democracy vs. dictators, what U.S. can do	20820
role of education in creating social responsibility (address)	7352
Democratic Party, platform, 1964	19433
Democratic Party of Kurdistan, Iraq, 6th congress, general information	20121
Demodulators, wide-band phase-lock, description	13212
Demography, changes in Eastern Europe	2115
Demonstration notes, experimental and demonstration manpower programs (series)	13024, 14663-664
Demonstration projects, <i>see</i> Recreational areas and demonstration projects.	
Demonstration team	1735
De Narra, Honorata A. V., relief	15620, 17489
DeNauw, Lois J., foreign trade regulations of Republic of Korea	10693
Denial and probation orders currently affecting export privileges	6842
Denmark:	
Atomic Energy Commission activities, 1962-63	19963
communications satellites, intercontinental testing, agreement	1604
Denmark Day at New York World's Fair (remarks)	11973
electronic products, market information	21069
establishing business in	8825
maritime matters, use of ports and waters by NS Savannah, agreement	18975
plant quarantine requirements	15202, 20905
Dennard, John S., ideal-gas tables for oblique-shock flow parameters in air	9592
Dennis, P. R., reliability and redundant circuitry	21737
Dennis, William A., United States coast pilot 7, Pacific Coast, California, Oregon, Washington, and Hawaii	1850
Density:	
atmospheric—	
falling sphere measurements	16998
horizontal and vertical distributions, up to 90 km	19139
atom, measurements by luminescence of solids	9530
bulk density studies on commercial blend of western coking coals	18686
measurements with rocket grenade experiment, 1960-63	20621
upper-air, measurement	9533
Density function, <i>see</i> Probabilities (mathematics).	
Dental assistants, ancillary personnel effect on treatment capability of USAF dental officer	70
Dental care, <i>see</i> Dentistry.	
Dental caries, <i>see</i> Teeth.	
Dental clinics, dental programs in local health departments, 1962	16830

Entry	
Dental hygienists:	
District of Columbia license, waive theoretical examination—	
law	17319
report	15786
employment outlook	7376
Dental instruments and apparatus:	
apparatus for removal of dental calculus with ultrasound, USSR study	1252
Federal item identification guides for supply cataloging—	12294
supplements	3475
Dental laboratories, dental laboratory technicians, employment outlook	9393
Dental officers, <i>see</i> Dentists.	
Dental research:	
cortisone oral glucose tolerance responses	19186
NIDR research career and research career development awards	9644
Dental Research, National Institute, <i>see</i> National Institute of Dental Research.	
Dental schools, NIDR research training activities	9644
Dental supplies, Federal item identification guides for supply cataloging, supplements	3475
Dental, technicians, repair, Navy training course	7637
Dentifrices:	
enzyme activity analysis as method of evaluation of action of oral preparations	72
evaluation of prophylaxis pastes and topical applications prepared with X-14 stannous fluoride solution	5910
Dentigraps, calligid copepod genus	9652
Dentistry:	
anesthesia for patient with heart disease	11549
Bulgaria, long term development	7237
dental care plans, 1963, digest	16832
dental care services for school children, Woonsocket, R.I., study	13421
dental services for Indians, annual report, fiscal year 1964	21844
dental support, Fleet Marine Force manual	9486
dental surgery during anticoagulant therapy	5650
District of Columbia practice, amend act—	
law	17319
report	15786
fees, selected schedules, United States	1565
local health departments, dental programs, census, 1962	16830
maxillofacial and oral health, military research	11850
NIDR reports on dental research—	21793
number of dental visits, U.S., July 1963-June 1964, current estimates	21859
peridental examination systems, study	15239
public health—	
introduction	15057
U.S. and Canada, trends	9730
Public Health Service grants for research in dental health	1555
restorative, treatment capability of Air Force dental officer	70
school dental care in community with fluoridation	11576
vacuum adaptation of baseplate materials	19184
veterans outpatient care where discharges were corrected—	
law	17289
reports	10277, 15752

# JANUARY-DECEMBER

	Entry		Entry
Dentistry—Continued		Desert lands:	
X-ray, physical survey manual.....	20767	desert land act in mid-twentieth century.....	12310
<i>see also</i> Exodontia—Teeth.		extend time for final proof of development.....	21137
Dentists:		law.....	19580
Air Force dental officers—		report.....	8026
effect of ancillary personnel on treatment capability.....	70	Design (Industrial):	
relief—		safety design considerations for layout of facilities placement of equipment, and production processes (remarks).....	14682
law.....	8222	Design and construction of desalination pilot plant (reverse osmosis process).....	6536
report.....	377, 8409	Design and economic evaluation of fixed blankets for fast reactors.....	10025
care of your teeth and prevention of dental disease, message.....	21682	Design handbook for liquid and gaseous helium handling equipment.....	5870
civilian care of dependents of uniformed services, manual.....	2254	Design manual DM series.....	3196-3204, 20889-893
employment outlook.....	9394	Design of sailplanes for optimum thermal soaring performance.....	7502
internships, Public Health Service hospitals.....	16831	Designs (aircraft):	
role of dentist in national disaster.....	15963, 21852	high performance vehicles, turbulent boundary layer noise relation.....	11394
student loans, amend Public Health Service act to permit partial cancellation for practicing in shortage areas, reports.....	4533, 17582, 17609	Designs (architectural), <i>see</i> Architecture.	
Denver, Colo.:		Designs (decorative):	
consumer expenditures and income, 1961.....	1368-69	protection act, report.....	2186
occupational wage survey.....	9467	Designs (industrial):	
Deoxyribonuclease, USSR studies.....	1304	designs of electric systems for naval aircraft and missiles, technical manual.....	11497
Deoxyribonucleic acid, <i>see</i> Deoxyribonucleic acid.		engineering manuals.....	619
Department stores, <i>see</i> Stores.		machines, economic efficiency, evaluation, USSR study.....	9062
Dependent children, <i>see</i> Children.		molecular amplifier group.....	7959
Dependents:		Designs (patents):	
illegitimacy and dependency.....	21366	examiner, examination announcement, discontinuance notice.....	21056
Navy, rights and benefits.....	13319	in official gazette.....	3810
<i>see also</i> Armed Forces—Pay, allowances, etc.—Veterans.		Designs (printing), <i>see</i> Printing.	
Deployable centrifugally stabilized structures for atmospheric entry from space.....	14782	Des Moines, Iowa:	
Deportation, cases suspended.....	307, 15642, 17506	North High School, work-study program for educable mentally retarded.....	612
Deposition and sedimentation, erosion and sedimentation in semiarid environment (series).....	10637	occupational wage survey.....	13061
Deposition and washout computations based on generalized Gaussian plume model.....	117	de Socarras, Miguel, relief.....	15438, 17229, 17685
Depots, <i>see</i> Military depots.		Desorption:	
Depreciation:		desalination by electrosorption and desorption.....	18163
electric utility practices, 1961, classes A and B privately owned companies.....	6641	helium, drastic reduction of warm-up rate within Dewar system.....	13639
guidelines and rules for tax purposes, revenue procedure 62-21, 1964.....	21371	thermal, cesium coatings on tungsten.....	5590
Depth perception, <i>see</i> Perception.		DeSoto, Kansas, railroad accident.....	6872
Der, James J.:		Desoxyribonucleic acid:	
airfoil characteristics in nonequilibrium ambient stream based on linearized theory.....	13258	distribution in testicles of rats after gamma-irradiation with Co <sup>60</sup> , histochemical characterization, USSR study.....	1271
supersonic 2-dimensional and axisymmetric nonequilibrium flow.....	13250	duck embryos and frog eggs, USSR translations.....	2597
Dermatoses, <i>see</i> Skin diseases.		molecule flexibility, USSR study.....	10876
Dermo-optical sense, <i>see</i> Tactile sensitivity.		participation of both strands of DNA in transfer of genetic information, USSR study.....	16355
Der Nersessian, Sirarpie, Armenian manuscripts in Freer Gallery of Art.....	6752	stability of functionally heterogeneous portions to ionizing radiations, USSR study.....	14623
DeRusso, P. M., adaptive-predictive modeling of nonlinear processes.....	20521	transport, spiralization degree determination by fluorescent properties of complexes, with acridine dyes, USSR study.....	2889
Desalination, catalyst of international cooperation remarks.....	21369	Destroyers (warships):	
Desalting of sea water, <i>see</i> Sea water.		midship bending moments.....	7727
Desarrollo del personal como una parte integrante de la administracion.....	8525		
Descriptive cataloging, <i>see</i> Cataloging.			
Descriptors, <i>see</i> subject headings.			



# INDEX 1964

	Entry
de Talleyrand, Anna Gould : estate, computing— law ..... report ..... Detection of pathogenic bacteria in endogenous medium..... Detectors : instruments for toxic gases, vapors, and dust, East German trans- lation ..... interplanetary plasma..... pyroelectric detection techniques and materials..... underwater detection based on use of magnetic and electrical phenomena, USSR study..... <i>see also</i> Phase detector. Detergents, <i>see</i> Cleaning compounds. Determination of radium in water..... Detonations : formation in hydrogen-oxygen mix- tures from 0.2 to 2 atmo- spheres initial pressure in 54- meter long tube..... waves, formation in stoichiometric hydrogen-oxygen mixture, high- speed photographic investiga- tion ..... <i>see also</i> Explosions—Nuclear explo- sions. Detroit, Mich. : occupational wage survey..... principal electric facilities, map..... world's fair, 1972, hearing..... Deurbrouck, Albert W. : preparation characteristics of coal from— Hancock, Brooke, Ohio, and Mar- shall Counties, W. Va..... Russell County, Va..... Deuterium oxide, <i>see</i> Heavy water. DeVauey, Will E., low-temperature phase equilibria of natural gas of low helium content..... Devaris, Angeliki, relief..... Developing self-guiding trail in na- tional forests..... Development, <i>see</i> Underdeveloped areas. Development (economics), <i>see</i> Eco- nomic policy. Development assistance, <i>see</i> Foreign aid. Development research digest..... Devenney, John H., BOUMAC pro- gramming system..... Devices : safety, refrigerator doors, progress, hearing ..... self-positioning for collection of parotid fluid from isolated hu- man subjects..... Devils Lake Sioux Tribe of Fort Tot- ten Indian Reservation, <i>see</i> Sioux Indians. Devils Postpile National Monument, general information..... Devine, Edward J., rolling element slip rings for vacuum appli- cation ..... DeVoe, James R., radiochemical analy- sis, activation analysis, instru- mentation, radiation and radio- isotope techniques..... Devonian period : coral genus <i>Billingsastraea</i> ..... Helderberg Group and position of Silurian-Devonian boundary in North America..... Middle and Upper, lithologic and geologic maps of rocks, Finger Lakes region, N.Y..... Dew point, temperature-humidity measuring set AN/TMQ-11 (A), modification and testing.....	17412 17616 20219 1025 7520 11355 14770 7267 14349 9604 11393 11284 674 6353 14746 5488 18683 445, 1878 19092 14396 5549 4500 8003 14967 9608 16741 4798 6799 12505 7961

	Entry
Dewar flask, helium desorption, dras- tic reduction of warm-up rate within system..... Dewaxing of petroleum, <i>see</i> Petro- leum. Dewey County, Okla., soil survey re- port ..... DeWolfe, Mildred R., hay in United States, quantities grown in normal year, surplus and deficit areas ..... DeWoody, Robert T., noise from pneu- matic rock drills, muffler de- signs ..... Dexterity and perceptual test, ex- hibit ..... Dezzani, Peter H., evaluation of UH- 1B with 60-gallon external fuel tanks ..... DHIA, <i>see</i> Dairy herd improvement associations. Diabetes : are you related to a diabetic? facts..... foot care for diabetic patient..... general information..... nurse and diabetic..... prevalence and results of glucose tolerance test, by age and sex, United States, 1960-62..... source book..... Diagnosing soil salinity..... Diagnosis : functional, of kidneys, USSR study ..... instruments and apparatuses, USSR study ..... nervous diseases, use of electronic digital computer, USSR study..... USSR practices..... X-ray apparatus, problems during use, USSR studies..... <i>see also</i> Radiodiagnosis—also names of diseases. Dialectical materialism, <i>see</i> Material- ism. Dialysis, pepsin and trypsin fragments during electro-dialysis, USSR study ..... Diamesinae, <i>see</i> Flies. Diammonium phosphate, DAP, viscous solutions as fire retardants, op- erational tests..... Diamond, Arnold H., comparative reg- ulations of financial institu- tions ..... Diamond, Norene M., workmen's compensation enactments in 1963 ..... Diamond, W. G. : clay and shale lightweight aggre- gate industry in south-central U.S..... mineral industry of Missouri..... Diamond drilling : estimating metal content and ton- nage of ore body from data..... studies ..... Diamond powder, grading in sub- sieve sizes, standard of trade..... Diamonds : artificial, in Ukrainian industry..... industrial— materials survey..... patents, U.S. list..... surface topograph of crystals..... tools, difficulties in manufacture..... Diapause, pink bollworm, inducement factors ..... Diapheromera femorata, <i>see</i> Walking- stick.	13639 7746 15222 5491 6096 13623 18893 11556 13401 13412 11585 15046 1697 20059 16156 11235 9211 9204 7149 2376 2106 7422 20478 1417 9502 1442 3042 5223 11314 11314 11404 5038 7952

Diaphragms:	Entry	Dietitians—Continued	Entry
metal, technique for measuring vapor pressure on tungsten (VI chloride and hafnium (IV) iodine).....	9500 5615	Veterans Administration—career opportunities.....	16905
sulfate cycle electrolytic cell.....	5615	Interns.....	13507
Diarrhea, field procedures for bacteriological studies of diarrheal diseases.....	21848	Differential equations, <i>see</i> Equations—Stochastic differential equations.....	
Diary of a pilot-cosmonaut, USSR.....	12930	Differential neutron thermalization.....	8052
Diatomole molecules, <i>see</i> Molecules.		Differentiation (biology): role of nucleic acids, USSR studies.....	4904
Diatomite, minerals yearbook chapter.....	14734	Diffraction:	
Diatoms, new species of marine pennate from Honolulu Harbor.....	21871	ground wave propagation, problems, USSR studies.....	2001
Dibble, Dean L., roadside hazard reduction with fire retardant chemicals.....	2378	theory, computation of modified Fresnel integral by variable screen.....	21784
Di Censo, Giuseppe, relief.....	14035, 19377	wave diffraction and propagation problems, USSR studies.....	21612
Di Chiro, Giovanni, axial transverse encephalography, new concept in pneumoencephalographic interpretation.....	5552	X-ray—	
Dichloranhydride of B-chloroethylphosphonic acid separation of lanthanide series and yttrium using phosphonic and iminodiacetic acid resins.....	18693	analysis of stresses appearing during machining of metals, USSR study.....	2674
Dichloro-diphenyl-trichloro-ethane, <i>see</i> DDT.		phases in binary systems $\text{CaO}-\text{Al}_2\text{O}_3$ , $\text{CaO}-\text{SiO}_2$ , and $\text{Na}_2\text{O}-\text{Al}_2\text{O}_3$ .....	11334
Dichlorophenoxyacetic acid, spray drift as cause of boxelder leaf blight.....	18069	powder patterns.....	16739
Di Cicco, Joseph, relief.....	17238, 17674	research, USSR studies.....	7286
Dickenson County, Va., coal, carbonizing properties.....	5496	Diffusers:	
Dickey, Harold P., soil survey, Morton County, Kans.....	5694	performance of Mach 6 open-jet tunnel and model-blockage effects at stagnation temperature to 3,600° F.....	16700
Dickson, Archie L., Jr., relief.....	2177	supersonic aerodynamics handbook.....	15008
Dickson, Tenn., ground-water geology of area.....	4449, 8215	Diffusion:	
Dictators, Latin America, democracy vs. dictators, what U.S. can do.....	20820	blade-element performance of rotor with tip diffusion factor of .43.....	18790
Dictionaries:		downwind from line sources, operational prediction.....	13627, 16993
cataloged by ASTIA, bibliography, foreign language and English in physical sciences and engineering.....	16737	gases in atmosphere, determination of parameters, Czechoslovak study.....	5081
military terms for joint usage.....	6875	hydrogen in carbon steels, effect of carbon content, USSR study.....	11003
<i>see also</i> Lexicography.		lateral turbulent, at surface of alluvial channel.....	18124
Die castings, zinc-base scrap, use for zinc recovery.....	11323	nonlinear, with homogeneous recombination and time-varying boundary conditions, numerical predictions.....	7526
Dienbienphu, North Vietnam, commemorating 10th anniversary of battle.....	12850	Ocean Breeze and Dry Gulch programs.....	5871
Dierks, Henry A., developing lock-hopper feeder for hydraulic hoisting of coal.....	7431	solid state, in metals and alloys.....	11854
Dies, <i>see</i> Taps and dies.		studies of oxidation resistant coatings on Mo-0.5 Ti molybdenum surface, cesium coatings on tungsten alloys at 2,500° F.....	18732
Diesel fuel, <i>see</i> Fuel oil.		sten.....	5500
Diesel mechanics, <i>see</i> Mechanics (persons).		surface diffusion saturation of metals and coatings seminar, USSR.....	10785
Diet:		turbulent, in surface layer of Earth's atmosphere, USSR studies.....	11110
calculating nutritive value, manual of instructions for use of punch cards for machine tabulation.....	20902	Diffusion welding, <i>see</i> Welding.	
cardiovascular effects of refeeding stress following starvation.....	7984	Digestion:	
Finnish Lapps, cesium-137 and potassium content.....	13392	analysis of electrogastragram and its variants in healthy persons, USSR study.....	1179
Dieter, W. E., stainless steel fumehood for safety in use of perchloric acid.....	14755	starch, action potentials of Ranvier nerve fiber nodes and in vivo-in vitro comparison, USSR study.....	16501
Dietetic Interns, <i>see</i> Dietitians.		trials using steers fed pelleted rations, comparison of chromic oxide and conventional methods.....	19105
Dietitians:		Digests, <i>see</i> names of departments, etc. issuing digests—also subjects.	
educational opportunities, college students, etc.....	21009	Digital computers, <i>see</i> Computers—Electronic computers.	
employment outlook.....	9395	Digital logic elements provide additional functions from analog input.....	14822
examination announcement.....	4399	Digital ohmmeter.....	21755

# INDEX 1964

	Entry		Entry
Digital tape recorder analyzer.....	21748	Diphyllobothriasis, distribution in Yenisey River, USSR study.....	9180
Dill, D. R., work tolerance, age and altitude.....	13735	Diphyllobothrium latum, role of lake fish in infestation of humans on lower reaches of Yenisey River, USSR study.....	9180
Dilldown Watershed, calibrating by using climatic data.....	8679	Diplomatic list.....	3423
Dille, J. Robert: central nervous system effects of chronic exposure to organophosphate insecticides.....	5999	Diptera, <i>see</i> Flies.	
flammability of lip, face and hair preparations in presence of 100% oxygen.....	13729	Direct energy conversion, <i>see</i> Energy conversion.	
Dillon, Douglas: remarks, etc.—		Direct reaction calculation.....	7537
Nov. 1, 1963.....	1638	Directories: accelerated public works program, approved projects.....	3207
Nov. 5, 1963.....	3177	ADP training, services and sources of information, 1964-65.....	19333
Nov. 15, 1963.....	1640	airports and seaplanes bases, airman's guide supp.....	3424
Nov. 18, 1963.....	1641	architectural, engineering and consulting firms with certified fallout shelter analysts.....	6065
Nov. 20, 1963.....	1639	Area Redevelopment Administration, approved projects.....	5925
Feb. 11, 1964.....	7824	aviation medical examiners.....	10041
Feb. 19, 1964.....	7823	BLS studies in industrial relations, 1954-63.....	11286
Feb. 22, 1964.....	7822	chemical statistics.....	15296
Apr. 14, 1964.....	9859	commercial dealers in seeds and planting stock for trees and shrubs.....	791
May 21, 1964.....	13503	community wage surveys—	
June 6, 1964.....	13504	1948-June 1963.....	5440
Aug. 18, 1964.....	16901	1948-July 1964.....	21676
Sept. 8, 1964.....	19009	Congress of United States, 88th Cong., 2d sess.....	1858
Sept. 17, 1964.....	19008	courts having jurisdiction in naturalization proceedings.....	8793
Oct. 9, 1964.....	20862	education, 1962-63, higher education, supp.....	2270
Oct. 22, 1964.....	21913	education 1963-64—	
Oct. 27, 1964.....	21914	church-related schools.....	15841
Dimantopoulou, Fotini, relief.....	6389	higher education.....	8480
Dimeff, John, reduction of fold-over errors in flux-gate magnetometers.....	21758	public school systems.....	15841
Dimensioning and tolerancing, military standard.....	10448	State governments.....	6562
Dimethylhydrazine, X-irradiation.....	18778	engineers graduated from electrical engineering faculty of University of Belgrade, Yugoslavia, 1923-56.....	2496
Dimock, Edward J., II, supplemental treatments to aid planted Douglas-fir in dense bracken fern.....	12465	fallout shelter analysts.....	17127
Dinger, C., computer programs in oceanography.....	21811	Federal Aviation Agency field facility.....	3506
Dining cars, railroad sanitation, construction, operation, etc., handbook.....	9715	federally financed student loans, fellowships and career training programs in field of higher education.....	4493
Dining rooms, areas, house planning aids.....	16960	fire safety training and speakers, Federal Fire Council.....	6793
Dinosaur National Monument, general information.....	16763	Health, Education, and Welfare Department, field directory.....	12530
Dinwiddie, George A., availability of ground water in parts of Acoma and Laguna Indian Reservations, N. Mex.....	12514	health units, local.....	20746
Diodes: average power dissipated in diode swept along its reverse characteristics.....	11441	homemaker services, 1963.....	11553
cesium thermionic, application of study of zero-field electron work function of metal immersed in gas.....	14886	Indian Affairs Bureau.....	3425
tunnel—		interagency, planning and development, educational, cultural, scientific and technical exchange programs, key contacts.....	15098
amplifiers, model EK/A-S, etc.....	13618	International Confederation of Free Trade Unions.....	4870
application in high speed computers, USSR study.....	16046	international mail, changes.....	3426
incorporated in monostable multivibrator circuit.....	14816	labor offices in United States and Canada.....	9375
with X-band waveguide mixer, noise figure measurement.....	19169	labor organizations, Western Hemisphere, Antigua, Grenada.....	21376
varactor diode parametric amplifier for rawlin set AN/GMD-2.....	65	labor unions in U.S., 1963.....	16605
Diphenyl: control of citrus spoilage, influence of time, temperature, and carbon venting.....	7930	library education directory 1962-63.....	4624
liquid heat transfer and vapor deposition studies at 700° and 800° F.....	10032	low-income housing demonstration program, projects.....	19809
Diphenylalkoxyacetic acid, esters, analgesic and antitussive action, USSR study.....	7266	market news reports, Federal-State.....	4184
		national directories for use in marketing.....	13441

# JANUARY-DECEMBER

	Entry
<b>Directories—Continued</b>	
National Institutes of Health scientific personnel.....	9721
national organizations for recreation.....	16789
Naval Weapons Bureau.....	3280
OASI service area directory.....	1590
post offices, 1963, with ZIP code numbers.....	20727
primary wood industries of Kentucky.....	14307
psychiatric clinics.....	14948
Public Health Service public advisory groups.....	11575
public training schools serving delinquent children.....	198
science and technology, checklist.....	5455
Securities and Exchange Commission, companies filing annual reports, 1963.....	9758
specialists of parent education.....	1828
standardization, Federal supply classification class and area assignments.....	2256, 6552, 12306, 17898
standardization SD series.....	2256, 17898
standards laboratories in United States.....	20636
State agencies and local officials responsible for employment and age certificate issuance.....	9376
State and territorial health authorities, 1964.....	18897
State departments of agriculture, 1964.....	9906
State mental health personnel and regional offices of Health, Education, and Welfare Dept.....	16742, 20648
State migratory labor committees.....	2948
State supervisors of pupil transportation.....	4647
State supervisors of trade and industrial education.....	4617
State surplus property directors.....	10662
Surplus Property Utilization Division.....	10662
teacher placement information, major sources, 1964.....	12328
teacher trainers of trade and industrial education.....	4618
telephone—	
Atomic Energy Commission, Sept. 1964.....	19268
Commerce Department.....	6125
House of Representatives, June 1964.....	12014
National Aeronautics and Space Administration.....	7467, 18724
Senate, spring 1964.....	8405
urban planning assistance program projects.....	3183, 9865, 16904
urban renewal projects.....	4125
Yugoslav Federal, Republic, and regional government officials.....	9130
ZIP code information, publications for sale by Superintendent of Documents, price list.....	18890
<b>Dirksen, Everett M.:</b>	
record of press conference statements for joint Senate-House Republican leadership.....	2136, 19535
Republican report, 88th Congress.....	2133, 19536, 21218
<b>Disability Insurance:</b>	
full retroactivity for disability determinations, amend Social security act—	
law.....	21142
reports.....	8316, 17833
how disabled must you be?.....	1584
social security program, facts and figures.....	1585, 15083
social security rulings.....	4040

	Entry
<b>Disability Insurance—Continued</b>	
veterans, disability ratings in effect 20 or more years, preservation, law.....	17304
what you need to know about social security disability benefits.....	21873
your social security, basic information.....	3131, 9772, 21874
Yugoslavia, disability compensation as special form of protection under law.....	2901
see also Old age, survivors, and disability insurance.	
<b>Disabled:</b>	
adults whose disabilities began in childhood, social security benefits.....	1588, 16861
applicants for social security benefits.....	13450, 16860
benefits for reservists, authorize law.....	19424
reports.....	15542, 19565
hearings.....	6346
Central Intelligence Agency improved disability system—	
law.....	21135
report.....	19566
disability days, U.S.—	
July 1962-June 1963, current estimates.....	9733
July 1963-June 1964, current estimates.....	21859
disability separation, facts for your future.....	20981
help needy disabled, general information.....	14216
impairments due to injury, July 1959-June 1961.....	5666
interviewing guides.....	2293, 8501-2
labor force, disability by employment status, U.S., July 1961-June 1962.....	7706
measuring capacity to work, seminar report.....	7734
permanent and totally—	
aid, State public assistance plans under social security act, staff development provisions.....	12355
recipient rates and average payments in counties of U.S., June 1960.....	10498
persons, operation of motor vehicles in interstate commerce, hearing.....	21207
public assistance—	
money payments to recipients, Oct. 1963.....	14215
program facts.....	12356
types of injuries, incidence and associated disability, July 1957-June 1961.....	11583
what you need to know about social security benefits.....	21873
see also Pensions—Rehabilitation of the disabled—Veterans.	
<b>Disabled American Veterans:</b>	
legislative objectives, 1964, hearings.....	10347
report, 1963 convention.....	4444
<b>Disarmament:</b>	
arms control and disarmament—	
bibliography.....	17033
research and studies by Government agencies, report.....	11833
research studies in progress or recently completed, semiannual report.....	7773, 15106
documents, 1963.....	19200
economic and social consequences.....	13668
national strategy, security, and arms control.....	4276
President Johnson's peace proposals at Geneva conference, elaboration.....	15261



# INDEX 1964

	Entry
Disarmament Agency, <i>see</i> Arms Control and Disarmament Agency.	
Disasters:	
aircraft emergency procedures over water	3240
civil defense, light duty rescue course, instructor's guide	6067
community emergency health preparedness	20755
continuity of government, constitutional amendment, explanation	19646
economic, authorize loans under consolidated FHA act, hearing	15581
economic injury loans for small firms	
natural disasters	21865
product disasters	21866
emergency broadcast system (EBS) plan	8153
emergency health preparedness publications catalog	18905
emergency operating centers, professional guide	6070
Federal credit unions, emergency preparedness guidelines	652
food supplies available in case of national emergency	17902
highway traffic regulation in emergency (remarks)	15375
Hurricane Dora, 1964, emergency actions, information etc., civil defense report	21047
loans to small business, broaden causal basis	
hearings	2109
law	6175
reports	467, 4464
medical self-help training program, Army pamphlet	106
national plan for emergency preparedness, basic principles, and index of authorities	12330
Disasters:	
national, role of—	
dentist	15063, 21852
veterinarian	18921
national warning system (NAWAS) operations manual	8152
nuclear attack, national recovery in period following, emergency planning	19645
relief funds appropriations, 1964, supplemental	10187
law	10139
response to disaster, Alaskan earthquake, Mar. 27, 1964	19703
road program, amend U.S. Code—	
hearing	15820
law	21150
reports	17720, 19488
SBA loans to restore or replace businesses and homes	20785
wage and salary stabilization programs in post-attack emergency	12331
what is your job in war disaster (address)	14219
<i>see also</i> Relief work.	
Disbursing officers, Treasury Department, regulations	15139
Discharge ratings for streams at submerged section controls	18150
Discharges (electric), <i>see</i> Electric discharges.	
Disciplinary boards:	
Chief Medical Director of VA to act on recommendations—	
hearing	542
law	1936
report	2192
Discipline, conduct and discipline, FAA handbook	12379
Disconnect plugs, <i>see</i> Plugs.	

	Entry
Discounts, discount retailing, bibliography	11605
Discrimination, <i>see</i> Race problems.	
Discrimination in employment:	
age basis by Federal contractors and subcontractors, Executive order against	14669
better training and education for today's needs, increased employment opportunities, and elimination of racial and color discrimination (address)	830
Chicago Regional Community Leaders' Conference	16818
contractors, equal opportunities in military services—	
hearings	8394
report	8336
Eastern Regional Community Leaders' Conference	20733
equal employment opportunity—	
act, report	4565
addresses	1543-44, 9702, 15034
for Negroes (addresses)	224, 228
in Defense Supply Agency	14160
in Federal employment	17138
equal employment policies, training services program	20795
fair employment and full employment (remarks)	1361
Federal programs, hearings	6514
HHFA supervisor and equal employment opportunity policy	8791
manpower services for equal employment opportunity (address)	15862
Maryland, employment report	6075
State laws against, summary—	
fair employment practice acts	11259
older workers	11260, 16582
Discrimination reaction, pattern discrimination during 7-day confinement	3011
Discriminators, phase lock technique, demodulation of wide-band frequency modulation	13212
Diseases:	
agents as a military weapon, East German study	1326
cause of decrease in natural resistance of irradiated animals to live brucellosis vaccine, USSR study	12853
chronic—	
countywide screening programs	13395
Public Health Service grants for research	1555
food-borne disease investigation, analysis of field data, training lesson	16835
histidinemia	19309
human chromosomal, USSR study	5333
international statistical classification, revision considerations	9727
microwave treatment results, USSR study	18341
natural foci, methods for developing study in USSR and abroad, USSR study	12815
nervous system—	
diagnostics using electronic digital computer, USSR study	11235
USSR studies	16007
publications, price list	5643
<i>see also</i> Contagion and contagious diseases—Diseases of animals—Diseases of plants—Occupational diseases— <i>also</i> names or classes of diseases.	
Diseases of animals:	
animal morbidity report—	
calendar year 1963	7889
monthly	3253
<i>see also</i> names of diseases, or animals affected.	

# JANUARY-DECEMBER

Entry	Entry
<b>Diseases of fish:</b>	<b>Distortion:</b>
lymphocystis disease of fish..... 6717	analyzers, Hewlett Packard 330B or HOI-330D, instrument calibration procedure, technical manual..... 13362
parasitofauna of pond-raised carp, USSR study..... 4917	antenna pattern, plasma produced, perception, distance and perspective in Ames trapezoid illusion..... 21828
publications in English, basic list..... 15921	<b>Distribution (economics):</b>
publications on fish parasites and diseases, 330 B.C.-A.D. 1923..... 8621	making sales figures talk..... 5683
<i>see also</i> names of diseases or fish affected	<i>see also</i> names of commodities.
<b>Diseases of plants:</b>	<b>Distributors (apparatus):</b>
biologic control, Rumanian study..... 1036	distribution equipment, Federal item identification guides for supply cataloging..... 12293
biological controls for insects and diseases on agricultural crops, hearing..... 4485	supplements..... 3474
disease potential of wind-thrown timber, summary report..... 2396	<b>District Courts:</b>
forest disease research in the north- east, guide..... 769	civil procedure rules, proposed amendments..... 9903
Monterey pine..... 19750	criminal procedure rules, proposed amendments..... 7875
plant disease report..... 3850	eliminate diversity jurisdiction under direct action statutes..... 17298
plant pathology of Soviet East, USSR study..... 20221	law..... 17298
<i>see also</i> names of diseases or plants affected.	reports..... 6329, 10208, 21229
<b>Disinfestation, medical, utilization of</b> agricultural sprayers, dusters and aerosol generators..... 2688	judiciary and judicial procedure, D.C. code of laws..... 1970
<b>Disks, uniform-stress spinning fila-</b> mentary disk..... 20527	revise, codify, enact..... 509
<b>Dislocations of crystals, see Crystal-</b> lography.	report..... 4503
<b>Dismukes, Edward B., high-tempera-</b> ture transference numbers in pure and mixed aqueous elec- trolytes..... 8799	text, revision notes, etc..... 6514
<b>Dispensing opticians, see Opticians.</b>	jurisdiction to provide injunctive relief against discrimination in public accommodations, hear- ings..... 17378
<b>Dispersion, mathematics of dispersion</b> with linear adsorption iso- therm..... 19785	jurisdiction to recover fees, etc., for official services over ac- tions..... 15501, 17734
<b>Displacement, deformable body in</b> acoustic medium, USSR study..... 2712	law..... 21119
<b>Display of merchandise:</b>	reports..... 15553, 17857
affects retail sales of broilers and meat..... 14171	transfer Genesee and Shiawassee Counties to southern divi- sion..... 21119
retail stores, produce display work methods..... 15212	law..... 15553, 17857
<b>Display panels, portable, has wide</b> use, etc..... 9558	North Dakota, terms of court of Williston, N. Dak., additional place, report..... 17735
<b>Display systems:</b>	Texas, eastern division, inclusion of Hopkins County within Paris division..... 17371
alpha-numeric, information assim- ilation, amount and density pre- sented..... 13685	law..... 8285, 17738
cockpit, X-15 airplane for atmo- spheric and near-space flight missions..... 16712	reports..... 8221, 6284
monitoring, effects of visual dis- play mode..... 17012	venue in civil actions on tort claims, law..... 1963
target detection, visual display en- hancement and techniques of color filter, study..... 9980	Vermont, terms to be held at Mont- peller and St. Johnsbury..... 12007
<b>Dissertation (academic): USSR, vi-</b> rology, microbiology, and pathology..... 20141	law..... 10240
<b>Dissociation, chemical relaxation be-</b> hind shock waves in carbon dioxide..... 7529	<i>see also</i> Judges.
<i>see also</i> ion dissociation.	<b>District Judges, see Judges.</b>
<b>Dissolution and roasting techniques</b> for extracting cesium from po- lucite ores..... 9595	<b>District of Columbia:</b>
<b>Distances between ports, 1964..... 9675</b>	Adams-Morgan area urban renewal, hearings..... 19501
<b>Distillation:</b>	Adams-Morgan, democratic action to save neighborhood..... 21257
desalination systems, multi-phase ejectors study..... 10680	air traffic control center, automatic data processing operations, in- adequate administration by FAA, GAO report..... 8723
sea water, by large nuclear powered plants..... 9754	annual survey of manufacturers, 1962..... 6029
appendices..... 18936	
wiped film evaporator, economic and technical evaluation..... 19815	
<b>Distilled spirits, see Liquors.</b>	

# INDEX 1964

	Entry
District of Columbia—Continued	
appropriations, 1964—	
deficiency, hearings	10285
law	4421
reports	459, 2081
supplemental, proposals	6212, 10162
appropriations, 1965—	
hearings	6339, 15792
law	17338
reports	6303, 15707, 17514
supplemental, proposals	17465, 19528
Board of Education, school teachers, temporary, health and life insurance benefits, extend—	
hearing	6522
law	21123
reports	17794, 19461
Board of Podiatry Examiners, regulating practice of podiatry, amend act, report	6326
bridge over Washington Channel, designate Francis Case Memorial Bridge, report	15782
budget, 1965—	
amendments	6212, 17667
departmental edition	4323
document edition	4440
builders' hardware samples on file, chart	1648
buildings, dangerous or unsafe, removal, amend act—	
law	17345
report	17715
business corporation act, amend, report	15567
careers, this is Washington, general information	9373
chanceries, location in residential areas, prohibit—	
law	21151
reports	15573, 21196
charitable solicitation act, amend—	
hearings	12124
reports	6325, 8285
climatic summary 1951-60, decennial census	20877
code of laws—	
decedents' estates and fiduciary relations, enact, report	15484
judiciary and judicial procedure, revise, codify, enact—	
law	1970
report	509
judiciary and judicial procedure, text, revision notes, etc.	4503
1961 edition, supp.	8389
other commercial transactions, enact—	
law	17368
reports	15485, 15764
Columbia Plaza project—	
hearings	6349
terminate, report	12113
commissioners, locate vehicular tunnel under parts of Capitol and Botanic Gardens, authorize—	
hearings	12280, 15821, 17664
law	15398
reports	10224, 12065, 14092
constitutional rights of mentally ill, care, treatment, hospitalization, etc.—	
law	19405
reports	6476, 21195
construction authorized	3352
correctional industries fund, establish—	
law	19430
report	19456
credit unions act, repeal—	
law	17254
report	14105
crime legislation—	
hearings	4579, 8443
report	14101

	Entry
District of Columbia—Continued	
criminal laws, amend, report	17755
dental hygienists, waive theoretical examination—	
law	17319
report	15786
divorce, legal separation and annulment laws, amend, report	13972
downtown Washington urban renewal, hearings	6349
Education Board, salaries, increase—	
law	17433
reports	15568, 17613, 17716
electric rate book	4707
employment opportunities for the elderly, increase, hearings	8435
Federal communications services, additional costs resulting from failure to consolidate by GSA, GAO report	12487
Federal paperwork jungle, hearings	14014, 15599
fire and casualty insurance rate regulation laws, amend, hearings	10417
firefighting agreements with Md. and Va. communities, amend act—	
law	17332
report	15785
fireman (firefighter), examination announcement	11935
fish and wildlife regulations	14276
fishery products, wholesale dealers, list	711, 18012
geology and ground-water resources	12527
Government—	
health and medical activities, need to realign organizational and management structure, GAO report	8726
officers, salaries, increase, hearing	8374
unclaimed moneys held in trust, maintenance of perpetual accounts, eliminate—	
law	1940
reports	479, 2038
highways, financing by loan authorization and motor vehicles fuel tax increases, hearings	12125
home rule bills, hearings	19500
housing problems of the elderly, hearings	8434
income and franchise tax act, amend, report	15567
judges, retired, increase retirement salaries, report	15572
judges' retirement act, amend—	
law	21136
report	17786
labor organizations, reporting, register	16571
legislation, summary report	10303
life insurance companies—	
amend act eliminating record-keeping, etc.—	
law	17317
report	15774
amend act relative to capital stock—	
law	17414
report	17751
amend act relating to annual statements—	
law	1922
report	477
medical care for the aged, amend public assistance act, report	17752
milk, ice cream, etc., packaging sizes, amend act—	
law	17264
report	14106

# JANUARY-DECEMBER

	Entry
District of Columbia—Continued	
minimum wage law, amend—	6347, 6504
hearings	17805
report	13549
minimum wage status	3103
municipal waste facilities, 1962 inventory	18908
municipal water facilities	13448
museums, Washington and nearby area, guide	7406
occupational wage survey	11566
opportunities for typists and stenographers in Washington, D.C.	13378
Pennsylvania Avenue, report of President's council	17433
police and firemen's salary act of 1958, amend—	17716
law	15569, 17613
reports	17376
police and firemen, restrictions on residence, repeal—	17717
law	13976
reports	17105
population estimates, July 1, 1963, with preliminary estimates for July 1, 1964	17617
premarital examinations, require, report	673
principal electric facilities, map	17373
public assistance applicants, Unemployment Compensation Bd. to advise D.C. Welfare Dept. as to status—	17718
law	16821
report	4636
public higher education, recommendations of President's Committee	17331
public school finance program, 1962-63	17714
public schools educational employees on leave, increase partial pay—	2258
law	
report	
Public Utilities Commission, report, 1962	
real property, horizontal property act—	
hearings	4578, 8373
laws	1947, 17334
reports	484, 15496, 21232
redevelopment act of 1945, amend—	
hearings	6349
report	12099
regulation of securities sales—	
hearings	6348, 12259
law	17362
reports	4469, 17722
regulations rel. loaning of money on securities, exempt life insurance companies, etc.—	
law	1920
report	476
relocation costs made necessary by action of D.C. govt.—	
law	21121
reports	478, 15370
rural residential recreation subdivisions serving area, 1963	15835
sales and use taxes, exempt House of Representatives majority and minority rooms, report	17618
sales tax act, exempt Washington Terminal Co.—	
law	17422
reports	15495, 17750
services for senior citizens, hearings	12240
sick leave benefits for police and firemen, U.S. Park Police, and White House Police—	
law	17330
reports	6323, 15773

	Entry
District of Columbia—Continued	
southwest area project B, urban renewal, hearings	8376
Supreme Court Building, acquisition of additional grounds—	
hearings	2122
report	349
tax, exempt United Supreme Council, Scottish Rite Freemasonry	15450, 15671, 17209
tax, exempt Woodrow Wilson House—	
law	17329
reports	17507, 17709
teacher salaries, increase—	
law	17433
reports	15568, 17613, 17716
technical and skilled workers, employment in metropolitan Washington, estimates of future demand	611
traffic act, amend to increase fees for learners' permits—	
law	8226
reports	480, 6322
traffic safety compacts, consent of Congress—	
law	17325
report	12228
trust funds, legal investments, list	15834
uniform commercial code, enact—	
hearings	8375
law	1972
report	475
United Spanish War Veterans Memorial, authorize to erect—	
law	19420
reports	17352, 19577
urban renewal, hearings	6349, 19501
Washington, D.C., metropolitan area, hurricane survey, engineer report—	
departmental edition	15877
document edition	15408
wills, add properties to existing trusts—	
law	1921
report	483
women workers, 1960	19039
work stoppages, 1927-62	2050
see also Capital of United States.	
District of Columbia Committee, House:	
calendar	3646
committee print	10803
hearings	394,
6347-49, 8373-76, 12124-125, 19500-501.	
reports	380,
2038-39, 4469, 6322-26, 8285, 12099, 12113, 13972, 13974, 13976, 15450, 15495-496, 15567-570, 15572-573, 17476, 17507, 17617-618, 19456, 21195.	
District of Columbia Committee, Senate:	
calendar	3666
hearings	4578-79,
6504, 8443, 10417, 12259	
reports	475-484,
14101, 14105-107, 15657, 15671, 15773-774, 15782-783, 15785-786, 17709, 17714-718, 17722, 17750-752, 17755, 17786, 17805, 21232.	
District of Columbia General Hospital, control over drugs and other property, weaknesses, GAO report	12502



# INDEX 1964

Entry	
District of Columbia Redevelopment Land Agency, inadequate policies and practices relating to relocation of families from urban renewal areas, GAO report	19756
District of Columbia Teachers College, Junior College Division, establish, report	482
Disulfides, bonds in proteins, cleavage, effect on macromolecular size, USSR study	16018
Dittemore, William H., jr., soil survey, Koakum County, Tex.	9777
Divers, Navy diving manual, errata	1578
Dividends, <i>see</i> Life Insurance Stocks.	
Diving:	
deep sea, neon solubility determination in water and extracted human fat	13650
Navy manual, errata	1578
skin diving underwater sport, USSR articles	12940
Division of Foreign Labor Conditions, <i>see</i> Foreign Labor Conditions Division.	
Divorce:	
District of Columbia laws, amend, report	13972
laws, July 1, 1964	19032
records, where to write	11587, 18927
Dixie project:	
construct, operate, and maintain—	
hearings	19513
law	17423
report	15571
Dixon, H. Roberta, Putnam group of eastern Connecticut	19780
Dixon, Sidney C., effects of differential pressure, thermal stress, and buckling on flutter of flat panels	3022
Dixon Entrance to Cape Spencer, coast pilot, supplement	4405
DLSC, <i>see</i> Defense Logistic Service Center.	
DNA, <i>see</i> Desoxyribonucleic acid.	
Do you have question about reclamation?	7718
Doehlinger, Leon S., artificial defoliation of eastern white pine duplicates effects of chlorotic dwarf disease	8635
Docks:	
floating, Federal Item Identification guides for supply cataloging—	12297
supplements	3478
Dr. Sommerfeld equations, <i>see</i> Equations.	
Doctors, <i>see</i> Physicians.	
Doctor's degrees, <i>see</i> Degrees (colleges and universities).	
Documentation, International Federation, <i>see</i> International Federation for Documentation.	
Documents, <i>see</i> Government publications—Numerical lists and schedule of volumes of reports and documents — Records — <i>also</i> subjects of documents.	
Documents Office, <i>see</i> Public Documents Division.	
DOD, <i>see</i> Defense Department.	
DOD pamphlets	89-90, 1757, 4275, 8020-21, 11830, 17029-30, 19198, 20681-983.
Doddy, Cestra, relief	15435, 17221, 21225
Dodge, Harold R., Douglas-fir tussock moth	14300
Dodgeville quadrangle, Wis., geology	797
Doerr, Robert M., sensitive volumetric apparatus for determining gas-solid reaction kinetics	7439

Entry	
Dogs:	
acute radiation sickness, humoral component in effect of bone marrow transplantation, USSR study	4905
anesthetized, cardiorespiratory responses to compression therapy following decompression sickness	5904
coronary arterial blood flow, flowmeter for measurement	17011
lethal thermal burn, change in interstitial water balance, problem, USSR study	14474
mechanism of autoregulation in intact kidney	13734
reduced set point temperature in exercising dog	11785
repellent, use by postal employees, questions and answers	20730
seeing eye, guide for totally blind on air carriers—	
hearing	10322
reports	13973, 17541
Soviet studies in physiology—	
strontium-90 distribution in skeleton after single and long-term administration, USSR study	1251
surface immersion hypothermia, studies, summaries	8044
transient changes in arterial lactic acid at 21,000 feet	9986
working sled, rectal temperatures	4250
Dogwood, flowering, growing, general information	9944
Doherty, Ellen M.:	
education in Scotland	2271, 8484
educational data, Portugal	19627
Doherty, Richard M., sea scallop industry of Canada	2338
Dolan, Dorothea L.:	
digest, progress reports on State mental health planning, 1964	21791
State mental health planning grant proposals, 1963	5555
Dolata, Sonja, relief	17196
Dolby, John R., relief	10372, 15440, 17200
Dolch, W. L., protective coatings for concrete	14208
Dollar value of U.S. imports of merchandise for consumption, TSUS schedule by part by item, 1961	1823
Dollars:	
foreign gold and dollar reserves	12319
problem, factfinding trip to England, France, Switzerland, and Italy, report	10412
purchasing power based on wholesale price index, annual averages, 1890-1963	14712
rule in expanding world markets (remarks)	4718
Dolph, Robert E., jr., western pine beetle damage on Fremont National Forest	2395
Dolph-Tchebyscheff arrays of many elements and arbitrary uniform spacing	19168
Dolphins, <i>see</i> Cetacea.	
Domestic coins manufactured by mints of United States	21723
Domestic commerce, <i>see</i> Commerce.	
Domilelle:	
policemen and firemen of District of Columbia, repeal restrictions on residence—	
law	17376
reports	13976, 17717
Domingues, Louis P., physical properties of ceria powders	7452

# JANUARY-DECEMBER

	Entry		Entry
Dominican Republic:		Doss, Mildred A., index catalogue of	
agricultural commodities, agree-		medical and veterinary zoology,	
ment	3148	Trematoda, etc.	7895
defense, military assistance, agree-		Doty, Maxwell S., marine primary	
ment	15125	productivity bibliography	126
economic, basic data	18177	Double Jeopardy and waiver in Ju-	
mapping, cooperative program,		venile delinquency proceedings	10077
agreement	21893	Double resection in space, USSR	16458
Donahue, John F., value of prime con-		Doubla, Ariz., railroad	19530
tracts awarded by Federal		Douglas, John R., jr., fertilizer sum-	
agencies in ARA redevelopment		mary data by States and geo-	
areas	9996	graphic areas	13492
Donald, James R., demand for textile		Douglas County, Wis., redevelopment	
fibers in U.S.	44	area, opportunities for eco-	
Donaldson, Erle C., subsurface dis-		nomie growth	15251
posal of industrial wastes in		Douglas fir, see Fir.	
U.S.	11315	Douglas fir tussock moth, see Tussock	
Donaldson, Ralph J., jr., visual ob-		moths.	
servations beneath developing tor-		Douglass, Bernard S.:	
nado	19187	Christmas tree harvesting and mar-	
Donat, George:		keting	2366
addresses, etc.		cultural practices for growing	
Apr. 16, 1964	10043	Christmas trees	2365
June 10, 1964	13741	Dousopoulos, Demetrios, relief	297
Sept. 30, 1964	19275		6167, 6420
Oct. 1, 1964	19276	Doves, see Pigeons.	
Oct. 8, 1964	19274	Dovydenas, Suzanne, current projects	
Oct. 15, 1964	19278	on economic and social implica-	
Donegan, Donald L., testimony, hear-		tions of science and technol-	
ings	6526	ogy, 1963	14987
Donnelly, Charles H.:		Dow, Marvin B.:	
index to U.S. defense policies from		effects of oxidation on performance	
World War II through 1963	21169	of charring ablators	13256
United States defense policies in		thermal performance, etc., of abla-	
1963	19443	tion materials	21749
print as House document, re-		Dow Air Force Base, Maine, admin-	
port	17510	istration deficiencies of Govern-	
Donnelly, George R., development of		ment quarters, messing facili-	
Japanese photographic prod-		ties, and military leave, GAO	
ucts, industry, 1962	6001	report	6763
Donnelly, Warren H., nuclear power		Dowell, Robert L., market for U.S.	
and merchant shipping	13724	product in Morocco	19823
Doors:		Dowling, Bernice D.:	
flight crew compartment, closing		census of governments, 1962—	
and locking, civil air regula-		compendium of government fi-	
tions amendments	12365,	nces	19286
	12370, 12375	finances of school districts	4344
lighter door to ease strain for po-		finances of municipalities and	
tato warehousemen	7886	township governments	15305
Dopane, toxicity reduced with amino-		historical statistics on governmen-	
ethylisothiourea (AETH)		tal finances and employment	19287
in experiments on monkeys,		Downey, Robert L., jr., ratings by of-	
USSR study	7344	ficer groups of importance etc.	
Dopovidi Akademiyi Nauk Ukrain's-		of job characteristics	9085
koyi RSR (periodical):		Downs, William T., treatment of delin-	
translations	21554	quent begins with hearing and	
Doppler effects, tracking method using		calls for order in court	8145
simple CW beacon, experimental		Downwash (aircraft):	
results	9585	VTOL, dynamic pressure and thrust	
Dorf, Erling, petrified forests of Yel-		characteristics of cold jets dis-	
lowstone National Park	18832	charging from exhaust nozzles	
Dorland, Wade D., transistorized in-		designed for suppression	11397
strumentation system for acous-		Doyel, W. W., ground water resources	
tical data acquisition	20608	of Benghazi area, Libya	6823
Dorn, Harold F., international statis-		Doyle, Clyde G., memorial services	4415
tistical classification revision	9727	Doyle, D. V.:	
Dosimeters, thermoluminescent, on re-		performance of joints with bolts in	
coverable satellites	7652	laminated Douglas-fir	8674
Dosimetry:		performance of nail-glued joints of	
chemical, of ionizing radiation,		plywood to solid wood	18056
USSR studies	19892	Draftsmen, employment outlook	9412
clinical, recommendations of Inter-		Drag (aerodynamics):	
national Commission on Radio-		minimum drag bodies with cross-	
logical Units and Measure-		section ellipticity	18760
ments, insert	1491	minimum induced, aerodynamic de-	
dose rate of penetrating electrons of		sign of wings with cambered	
outer belt, USSR study	10719	spun	7556
high-level gamma-ray, Albany co-		ogive cylinder, boundary-layer ve-	
ball 60 facility	14747	locity profiles and skin friction	
measurements in work with radio-		due to surface roughness	3023
active iodine, USSR study	2487	parachutes—	
nuclear bomb survivors of Hiro-		radially vented	9612
shima and Nagasaki	15279	ribless guide surface to produce	
radiation, aboard spacecraft of 8th		low lift to drag ratios, flight	
Mercury-Atlas mission	18731	qualification	5882

# INDEX 1964

	Entry
Drag (aerodynamics)—Continued	
reduction, boundary layer control by blowing on NACA 65-424 airfoil, wind-tunnel investigation	16692
space station drag cancellation, electric and chemical thrust systems	20578
wing-body combination leading-edge sweep, effects of spanwise variation	9596
Dragovich, Alexander, counts of red-tide organisms, Gymnodinium breve, etc., Florida west coast, 1960-61	4745
Drainage:	
acid mine drainage, water supply pollution report	410
airfields, design provisions, engineering manual	15872
extent of acid mine pollution in U.S. affecting fish and wildlife	17998
from loess soil, duration of percolation	12458
ground water, specific yield, column drainage and centrifuge moisture content	819
infiltration and drainage in uniform sands (series)	6805
interior, drought effects in basins	807
sedimentation in small drainage basins (series)	21364
see also Mine drainage.	
Drake, Carl J., American species of lacebug genus Acalypta (hemiptera, Tingidae)	7605
Drake, Harold J.:	
barite	18658
graphite	18666
Drama:	
copyrighted—	
Jan.-June 1963	6528
July-Dec. 1963	15825
Drane, Charles J., Jr., Dolph-Tschebyscheff arrays of many elements and arbitrary uniform spacing	19168
Drawbacks, tax on nonbeverage distilled spirits	4846
Drawings:	
engineering—	
general drawing practice, military standards	4605
materials list, AEC index	8072
sizes and format, military standard	6547
types, definitions and requirements, military standard	15832
Navy design manual, changes	3196
revision of, military standard	4606
scientific and technical, copyrighted	2249, 10441, 19609
transmission voltages, line construction	18932
Venetian, from Correr Museum, catalog of exhibition	3054
Drellishak, Kenneth S., partition functions and thermodynamic properties of high temperature gases	7988
Drennan, Lorin H., testimony, hearings	6526, 8456
Dresses:	
inaugural gown of Mrs. John F. Kennedy, National Museum exhibit	1583
women's and misses', industry wage survey	9469
Dried foods:	
freeze dried, industry	2267
freeze-drying cost projections	4210
see also names or classes of foods dried.	

	Entry
Driers, see Dryers (industrial).	
Drill (military), see Military drill.	
Drilling, see Core drilling—Diamond drilling.	
Drills (tools):	
noise from pneumatic rock drills—	
shape and exit noise of exhaust muffler	13126
testing muffler designs	5491
Drinking places, industry wage survey	16606
Drinking water, see Water.	
Dripping Spring quartzite formation, southeastern, Arizona	8758
Driscoll, Edward J., remarks, Oct. 20, 1964	19317
Drivers, see Automobile drivers—Motor vehicle operators—Motor-truck drivers.	
Drooz, A. T.:	
aggregation affects color of elm spanworm larvae	2383
elm spanworm head-capsule measurements	2382
Dropouts, see High schools—School attendance.	
Drops, droplet impact measurements, theoretical aspects	13
Dross, see Slag.	
Droughts:	
basins of interior drainage, effects	807
effects along Pacific Coast in California	808
Southwest, 1942-56 (series)	807-808, 4787
Drug Abuse, President's Advisory Commission on Narcotic and, see President's Advisory Commission on Narcotic and Drug Abuse.	
Drug addiction, see Narcotic habit.	
Drug Safety Commission, interagency coordination on drug research and regulation, hearings	19598
Drugs:	
abuse, President's Advisory Commission—	
interim report	3087
report	5636
acetylcholine, new medicinal and physiological role, USSR studies	10856
antibiotics, regulations, assay and certification tests	18034-35
antihypertensive, synthesis, main trends, USSR study	2892
code of Federal regulations	12401
cost, progress report	13532
District of Columbia General Hospital, weakness in control of	12502
drugs and heart disease, review of research grants by National Heart Institute	11445, 16743
drugs from stag antlers, USSR study	10968
emergencies, communication on, testimony, hearings	8445
F.D.C. regs	4749
first facts about drugs	6734
5-nitrofurant derivatives, antibacterial preparations, USSR studies	21586
food, drug, and cosmetic act—	
enforcement and compliance, FDA report, monthly	3463
notices of judgment	5802
requirements guide for foreign manufacturers, etc.	18037
text and enforcement regulations	762, 14287
import detentions, report	3968

# JANUARY-DECEMBER

Entry	Entry
Drugs—Continued	Dubbs, Carbon P.:
interagency coordination in re-	estate, computing—
search and regulation, hear-	law
ings	reports
mental illness, testimony, hearings	15700, 17412
pharmaceutical industry reviewed,	17616
USSR study	Dubuisson, A. U., combat perform-
pharmaceutical preparations ex-	ance of EM with disciplinary
cept biologicals, shipments,	records
current ondustrual reports	21006
1817, 21033	Ducks, waterfowl age and sex iden-
pharmacological characteristics of	tification by means of wing
preparations, USSR studies	plumage, preliminary keys
physiological effects of certain So-	18030
viet pharmaceutical prepara-	see also Wood ducks.
tions	Duckworth, W. Donald:
problems, testimony and exhibits,	Brazilian moth of genus Gonloterma
including correspondence,	with notes on related species
hearings	(lepidoptera, stenomidae)
proceedings of National Conference	neotropical microlepidoptera, IV,
on Pharmaceutics held in	new genus of Stenomidae,
Bucharest, Bulgaria	etc
5076	North American Stenomidae
residues from medicated feeds, keep	20657
out of poultry, meat and eggs	Ducted fans, vectoring thrust, effec-
Rumania, creation and judicious	tiveness of exit vane cascade
use of supplies	configurations
specialized, testimony and exhibits,	20575
including correspondence, hear-	Ductility:
ings	arc-melted tungsten effects of pur-
8445	ity and structure
surgical techniques, instruments,	bending in ionic crystals, mech-
and other surgical studies,	anism
USSR	E-steel, exhaustion caused by pre-
6898	strain and aging
testing, testimony, hearings	16853
trade of United States, Western	Ducts (aircraft):
Europe, Canada, and Japan in	supersonic aerodynamics hand-
pharmaceutical products, 1961-	book
62	15008
USSR, prospects of development of	Ducts (atmospheric):
chemiopharmaceutical indus-	investigating ionospheric ducting
try	with ORBIS beacon
16313	5875
16364	Dugan, John V., Jr.:
see also Antihistamine drugs—	molecular ion propellants and sur-
Narcotics — Psychoactive	vey of molecular plasma colli-
drugs — Tranquillizing drugs	sion processes
also names of drugs.	7493
Drugs (containers):	three-body collisional recombination
steel shipping, current industrial	of cesium seed ions and elec-
reports	trons in high-density plasmas
3390, 8120	with argon carrier gas
Drugs (test):	21752
Micum revolving drum coke testing	Duke, George B., effects of close-row
method, correlation with	spacings on peanut yield, etc.
ASTM test	4220
16633	Dulles International Airport, annual
Drury, Ill.:	report, 1963
bridge across Mississippi River—	13278
hearings	Duluth, Minn.:
report	area redevelopment manpower re-
17663	port
10218	motor carrier accident
Dry cells, see Electric batteries	principal electric facilities, map
Dry farming, legumes and grasses	675
in cropping systems in north-	research and field laboratory for
ern and central Great Plains	water pollution control
7034	11573
Dry Gulch Project, diffusion program,	wholesale fruit and vegetable mar-
data, etc	kets, organization
5871	5838
Dryden, Franklin B., nomination,	Dunavant, James C., heat transfer to
hearing	delta-wing-half-cone combina-
17866	tion
Drydocks, facilities, Navy design	7545
manual, changes	1703
3202	Dunegan, John C., apple bitter rot
Dryeration, corn drying process,	Dunes, coastal, Oregon sands for use
progress report	as glass sand, beneficiation
9910	studies
Dryers (Industrial):	16635
costs of electric power and fuel in	Dunham, Charles L., remarks, Sept.
cotton gins, Arkansas and	26, 1964
Missouri	19257
2261	Dunham, Ralph E., teaching faculty
Drying:	in higher education 1962-63,
equipment, Federal item identifica-	etc
tion guides for supply cata-	6575
logging	Dunn, Halbert L., positive view of
12202	aging asks much of education
supplements	12325
3473	Dunsmuir House Conference, see
see also names of substances dried.	Space, Science and Urban Life
DSA, see Defense Supply Agency.	Conference.
DSA-DLSC handbook	Duodenum, mucosa, restorative pro-
12301, 21253-254	cesses following radiation in-
Dual distribution, see Competition.	jury, USSR study
Dubas, Floyd J., basic data on	2644
economy of Malaysia	Duplicating processes, repro typing
10694	and layout, for contractor re-
	ports for NASA
	16665
	Duplicating services, see Letter serv-
	ices.
	Durable goods, see Commercial prod-
	ucts.



# INDEX 1964

	Entry
Durham, David L. : geology— and oil resources of eastern Puente Hills area, southern California -----	10641
Cosio Knob and Espinosa Canyon quadrangles, Monterey County, Calif -----	12506
Reliz Canyon, Thompson Canyon, and San Lucas quadrangles, Monterey County, Calif. -----	4776
Durham, Monte, Court of Appeals rule, amend criminal statutes of D.C., hearings -----	4579, 8443
Durham, N.C., consumer expenditures and income, 1961 -----	2956, 5427
Durrett, John C., vibration analysis of AFMTC VTOL test stand -----	20948
Durum wheat, <i>see</i> Wheat.	
Dury, G. H. : principles of underfit streams -----	18130
subsurface exploration and chron- ology of underfit streams -----	18131
Duryea automobile, 1893 -----	21796
Dussia, genus of Leguminosae family, description, etc. -----	1512
Dust : concentration measurement on Army overland train Mark II -----	16894
control measures at Long Island, Port Isabel, Tex., authorize— hearings -----	17663
law -----	18876
reports -----	10223, 12214
copper precipitator, laboratory smelting -----	5483
detectors, East German transla- tion -----	1025
ignition, preventing by inerting in mines and industry -----	21713
<i>see also</i> Coal dust—Cosmic dust.	
Dusting apparatus, medical disinfecta- tion, use of agricultural sprays, dusters, etc. -----	2688
Dutch elm disease, control -----	9935
Dutcher, L. C., geologic, etc., features of San Bernardino area, Calif -----	8774
Duthie, Richard E. C. : engineering materials lists -----	1774-75, 8071, 8073, 13710, 21016-17
index -----	8072
Duties, <i>see</i> Tariff—also names or classes of articles imported.	
Duty, honor, country, address -----	8020
Duvall, Wilbur I., instrumentation to record vibrations produced by blasting -----	14763
Dwarf mistletoe, <i>see</i> Mistletoe.	
Dwellings, <i>see</i> Houses.	
Dwight D. Eisenhower Library, gen- eral information -----	11427
Dworsky, Leonard B., address, Oct. 8, 1963 -----	5648
Dworzanski, Anna, <i>see</i> Smal, Anna.	
Dworzanski, Jan, <i>see</i> Smal, Jan.	
Dyal, R. S., preparing potted mediums and composites, plant growing mediums -----	20903
Dyes and dyeing : dyes, etc., from fluorine compounds, USSR study -----	927
mesidine, toxicology, USSR study— <i>see also</i> Acridine dyes.	1054
Dynamic response of airplanes to at- mospheric turbulence includ- ing flight data on input and re- sponse -----	13257
Dynamic stability, <i>see</i> Stability of aircraft.	
Dynamics : clinical studies with radiolabels -----	15286
determination of dynamic processes in piecewise linear automatic control systems -----	9622

	Entry
Dynamics—Continued	
dynamic biotelemetry, USSR -----	9184
physical-chemical systems in mam- mals -----	21738
pilots' response to effects of high sustained acceleration -----	14843
severe convection storms -----	11699
soil, Waterways Experiment Sta- tion research capabilities -----	637
spin, of manned space stations -----	11419
sub-polar front in North Atlantic, USSR study -----	6885
touchdown analysis of spacecraft for soft lunar landing -----	5510, 14842
variation problems and fluctuation escape, Soviet papers -----	16430
visco-elastic solids determining by employing forced vibration -----	8510
Dynamocardiography -----	14914
Dysbarism, various aspects of symp- toms and signs -----	13646
Dysentery, <i>see</i> Amebiasis.	

## E

E. Brooke Matlack, Inc., <i>see</i> Erie- Lackawanna RR.	
E.E.C., <i>see</i> European Economic Com- munity.	
E.R.S., <i>see</i> Economic Research Service.	
E.S.D., <i>see</i> Electronic Systems Divi- sion.	
Egan, Charles J. : calibration of mercury strain gauge -----	19148
rectal temperature of working sled dog -----	4250
Egan, Patrick E., relief -----	17690
Eagle (periodical) -----	3427
Eagle-Picher Co., zinc-lead mines, loading, etc. -----	5477
Eagle Rock, N.C., railroad accident -----	12571
Eagles, golden, control, hearings -----	10282
Eagleson, P.S., thermistor probe for measuring particle orbital speed in water waves -----	12340
Eakin, J. L., review of well stimula- tion and techniques to prevent formation damage in oil and gas production -----	21690
Ear : central factor in pure tone auditory fatigue -----	4317
sensitivity to unidirectional fre- quency modulation -----	5463
Earl, Edward O., lands in Pima Coun- ty, Ariz., convey to -----	15480
Earle, F. R., oil and protein content of corn inbred lines -----	7895
Earlham, Iowa, organizes basic serv- ices for its aging -----	15171
Early County, Ga., redevelopment area, opportunities for econom- ic growth -----	20979
Earned degrees conferred, 1960-61, bachelor's and higher degrees -----	2269
Earnings, <i>see</i> Salaries—Wages.	
Earth : cosmic dust, USSR study -----	12968
crust and upper mantle— investigation, USSR -----	11020
stratification, USSR study -----	5200
crustal structure— Antarctic north of Novolazarev- skaya station, results of geo- physical studies, USSR study -----	6683
chemistry, USSR study -----	2593
Siberia and Far East according to data of regional geophysical investigations, USSR study -----	6909
transition zone from Antarctic Continent to Indian Ocean, geophysical investigation, USSR study -----	5202

# JANUARY-DECEMBER

	Entry		Entry
<b>Earth—Continued</b>		<b>Earthquakes—Continued</b>	
crustal structure—continued		seismology, publications, list.....	9768
vertical movements as indicated		shear deformation of upper mantle	
by data on European isostatic		mineral analogues.....	19151
anomalies, USSR study.....	6879	Skopje, Yugoslavia, U.S. aid allo-	
development, cyclic nature, USSR		cation, hearing.....	386
study.....	12927	statistical forecasting of annual	
farmer's world, yearbook of agri-		seismicity of Kuril-Kamchatka	
culture, 1964.....		and California zones in ad-	
departmental edition.....	16952	vance.....	10913
document edition.....	17450	United States, 1961.....	220
first-order error statistics for 3-		USSR studies.....	16084
and 4-station hyperbolic fixes		worldwide collection and evaluation	
on surface of sphere.....	19166	of data, final report of 1960	
figures, in southern Arizona.....	18117	seismicity.....	17016
fourth order gravity field effects on			
drift of 24-hour equatorial sat-		<b>Earths:</b>	
ellite.....	7515	fluid movement in earth materials	
geologic history traced through		(series).....	4789
present-day fishes, hypotheses,		manual, guide to use of soils as	
etc., USSR study.....	7325	foundations, etc.....	5672
gravitation, etc., determination		<i>see also</i> Rare earths.....	
contributing to knowledge of		<b>Earthwork and structures:</b>	
nature of planets.....	9616	earth manual, guide to use of soils..	5672
heat exchange at ground surface.....	19653	engineering capabilities of Water-	
hydrodynamic forecasting of pres-		ways Experiment Station.....	631
sure fields in mid-level of at-		soil mechanics, foundations, and	
mosphere for entire sphere con-		earth structures, Navy design	
sidering orography, USSR		manual, change.....	3197
study.....	6884	<b>Earthworms:</b>	
materials, hydraulic properties (se-		chemicals, effects on.....	8624
ries).....	819	relation to soil productivity.....	11743
middle ultraviolet radiance of earth		<b>Earwigs, <i>see</i> European earwigs.</b>	
and its limb.....	14885	East, John H., Jr., oil shale mining,	
moon systems, considerations of		Rifle, Colo., 1944-56.....	21684
small body in vicinity of stable		<b>East (Far East):</b>	
liberation points.....	7557	agricultural situation, 1964.....	8475
motion measurements, intermediate		Educational Materials Laboratory	
range detonations.....	119	report.....	6565
neutral hydrogen in environs.....	2699	Far Eastern series.....	3142
space, accuracy of navigation with			13462
various combinations of on-		food balances, 1959-61.....	17909
board optical measurements.....	18774	foreign relations of U.S., 1943—	
structure, research, Soviet progress		departmental edition.....	1596
in magneto-telluric methods.....	7324	document edition.....	275
subsurface heat, utilization, USSR		oriental arts, Islam and the East..	4751
study.....	924	plant cover, scientific coordination	
surface, snow and ice.....	21278	conference report.....	2558
tides in atmosphere.....	18722	structure of earth's crust, geophys-	
upper mantle mineral analogues,		ical investigations, USSR	
shear deformation.....	19151	study.....	6909
<i>see also</i> Satellites—Terrestrial mag-		<b>East (Middle East):</b>	
netism.....		accessions list, Library of Congress	
<b>Earth blocks, use in farm construc-</b>		American Libraries Book Pro-	
<b>tion.....</b>	<b>7953</b>	curement Center, Cairo.....	3721
<b>Earth satellites, <i>see</i> Satellites.</b>		communism's decline.....	1758
<b>Earth sciences, <i>see</i> Science.</b>		indefinable region, geographic no-	
<b>Earthquakes:</b>		menclature problems.....	15102
Alaskan—		Near and Middle Eastern series.....	1602
civil defense emergency opera-			15102, 18961
tions.....	15339	oriental arts, Islam and the East..	4751
grants, authorize—		research studies—	
law.....	12006	completed, list.....	7755
reports.....	10280, 10404	in progress, list.....	9791
preliminary geologic evaluation.....	10634	social science, in progress.....	20815
Prince William Sound, Mar.-		translations.....	928,
Apr. 1964, report, preliminary.....	11959	937, 1117, 1284, 1300, 2526,	
provide insurance, hearings.....	12267	2607, 2624, 2696, 2916, 4952,	
reconstruction grants—		5120, 5163, 5305, 5405, 6903,	
hearings.....	14140	6968, 7071, 8943, 9017, 9087,	
law.....	17310	9102, 9240, 10735, 10776, 12755,	
reports.....	13953, 14067, 15556	16249, 16558, 18235, 18436,	
response to disaster.....	19703	18500, 18594, 19885, 19955,	
<b>epicenter—</b>		20015, 20084, 20094, 20119,	
determining by polar and sliding		20146, 20161, 20193, 20310,	
rectilinear epicentrals.....	9044	20363, 21473, 21495, 21582,	
determining direction from Love		21611.	
and Rayleigh surface waves,		<b>United States and Middle East.....</b>	<b>18961</b>
USSR study.....	6891	<b>United States foreign aid program,</b>	
foci, peculiarities from energy at-		report of study, print addi-	
tenuation, USSR study.....	6904	tional copies, reports.....	15682, 17512
Hebegen Lake, Mont., Aug. 17,		<b>East (Near East):</b>	
1959.....	8769	Educational Materials Laboratory	
registration of Ps waves in Baykal		report.....	14188
region.....	9045		

# INDEX 1964

	Entry		Entry
East (Near East)—Continued		Echinoderms, polyspermy-blocking mechanism, USSR study.....	4078
foreign relations of U.S. 1943—		Echinoids, <i>see</i> Sea urchins.	
departmental edition.....	11619	Echo (ocean station), <i>see</i> Weather stations.	
document edition.....	10153	Echo satellites, <i>see</i> Satellites.	
Near and Middle Eastern series.....	1602, 18961	Echols, W. H., portable air-operated aerosol generators.....	7651
oriental arts, Islam and the East.....	4751	Eckerd, James W., anthracite metallurgical briquets as blast furnace fuel.....	7459
East (U.S.):		Eckerson, Louise O., pupil personnel services.....	5450
fresh fruit and vegetable unloads in eastern cities by commodities, States, etc.....	5789, 7879	Eckstein, Otto, nomination, hearing.....	17871
instrument approach procedure charts and airport obstruction charts, dates of latest editions.....	3407	Eclipses:	
strawberry culture.....	16951	Radio star scintillation over Canada, July 20, 1963.....	19153
East Asia, <i>see</i> Asia.		solar flux measurements, July 20, 1963.....	4231
East Coast Memorial, New York City, general information.....	19195	solar, ionospheric behavior, July 20, 1963, Bedford, Mass.....	7964
East Europe, <i>see</i> Europe.		Ecology:	
East Germany, <i>see</i> Germany.		benthonic species.....	14342
East North Central States, <i>see</i> Central States.		geochemical, USSR study.....	12935
East Pass Channel:		Gulf of Mexico commercial sponges and its relation to fishery.....	14283
engineer report—		implications to man of use of chemicals (paper).....	7692
departmental edition.....	10488	insects, basic semiconductor circuitry for ecological studies.....	15195
document edition.....	10159	lily of the valley, USSR study.....	16153
East Point, La.:		marine inhabitants, Soviet studies.....	7107
flood control, engineer report—		Phaeocystis pouchetii, USSR study.....	1145
departmental edition.....	12347	radioecology, terrestrial and freshwater, bibliography.....	125, 15285
document edition.....	12021	sea, USSR studies.....	18269
East St. Louis, Ill.:		sockeye salmon and related limnological and climatological investigations, Brooks Lake, 1957.....	21318
East Side Levee and Sanitary District, engineer report—		terrestrial and freshwater, offsite research of Biology and Medicine Division, AEC.....	130
departmental edition.....	17943	Economic and social consequences of disarmament.....	13668
document edition.....	17459	Economic assistance, <i>see</i> Foreign aid.	
East South Central States, <i>see</i> Central States.		Economic benefits from public health services, objectives, methods, etc.....	21846
East Tintic mining district, productive parts, study.....	8753	Economic conditions:	
East-West trade, <i>see</i> Commerce.		advances possible through new proposals (address).....	15172
Eastern Carriers' Conference Committee, emergency board report.....	10478	advancing toward prosperity (address).....	15367
Eastern Europe, <i>see</i> Europe.		American social and economic revolution, for whose benefit? (address).....	18607
Eastern Shawnee Indians, <i>see</i> Shawnee Indians.		business cycle indicators for 9 States, 1963, hearings.....	9478
Eastern Stanislaus area, Calif., soil survey report.....	21878	census of population, 1960, social and economic data by size of urbanized area and size of urban place.....	8391
Eastern States, <i>see</i> East (U.S.)		economic factors influencing educational attainments and aspirations of farm youth.....	10453, 12307
Eastern tent caterpillars, general information.....	19082	economic forces in United States.....	2962
Eastern Utilization Research and Development Division, publications and patents, list.....	4192, 15204	economic indicators.....	3428
Eastern white pine, <i>see</i> Pine.		economic information, methods of improving effectiveness, USSR study.....	9336
Eastlake, Mary G., relief.....	2159, 4450, 6144	economic reports.....	4326-34, 15299
Easton, Pa., occupational wage survey.....	13068	growth—	
Eastport, Maine to Montauk Point, N.Y., coastal warning facilities chart, 1964.....	13521	American achievement, through cooperation of business, labor and Government (address).....	13817
Eastport to Cape Cod, coast pilot, supplement.....	6105	based on moderation and cooperation (remarks).....	19363
Eating places, <i>see</i> Restaurants, lunch rooms, etc.		growth and expansion, elements and problems (remarks).....	8187
Eaton, Esther M., selection, etc., of library materials for modern language programs.....	6579	interagency studies program (remarks).....	13076
Eaton, Fred, paper, Feb. 19, 1964.....	8015		
Eaton, William W.:			
remarks—			
May 7, 1964.....	10129		
June 15, 1964.....	13831		
Oct. 20, 1964.....	21065		
Eave, Hilda M., relief.....	8264		
Ebel, Bernard H., insects affecting seed production of slash and longleaf pines.....	8691		
Eberle, A. R., boron scrap recovery by pyrohydrolysis.....	8062		
Ebreo, Valeriano T., relief.....	310, 6156, 6400		
EBS, <i>see</i> Warning systems.			
Eby, Harry J., disposal of poultry manure and other waste.....	16932		
Echinococcus, <i>see</i> Tapeworms.			

# JANUARY-DECEMBER

	Entry
Economic conditions—Continued	
growth—continued	
resulting from Federal programs (remarks)-----	8185
healthy state of economy (remarks)-----	19358
housing construction outlook for 1965 and economic situation (remarks)-----	19354
impact of—	
Federal supply and service activities, report-----	17441
Great Lakes low water level, hearing-----	19595
military and related civilian supply and service activities on economy, hearings-----	13916
tax exempt foundations and charitable trusts-----	8402
print additional copies of study reports-----	368-369, 2201-2
print hearings, report-----	19482
improvements in past few years, role of Commerce Department (remarks)-----	1857
influence on children, research programs, studies in progress-----	17120
mobility and worker adaptation to economic change in U.S.-----	5418
national economy, use computer technology to control, USSR study-----	16327
our changing economy (address)-----	8547
outlook 1964, and year-end review 1963-----	1855
Providencia, case study in economic censuses-----	15325
publications, price list-----	1551
report of the President to Congress—	
departmental edition-----	5635
document edition-----	4442
hearings-----	6192
report-----	6481
Soviet bloc developments, hearings, technology, role and effect, hearings-----	19608
see also names of countries, States etc.	
Economic controls, see Stabilization.	
Economic Conversion Commission, see National Economic Conversion Commission.	
Economic cooperation, see Foreign aid.	
Economic development, see Economic policy—Foreign aid.	
Economic disaster loans, see Loans.	
Economic indicators-----	3428
USSR, annual statistics-----	6189
Economic Joint Committee:	
committee prints-----	272,
6189, 6191, 8237-38, 10150,	
12012-13, 15400, 17441-442.	
funds—	
law-----	21153
report-----	19567
hearings-----	4424, 6190,
6192-93, 10149, 13916, 19435	
publications, Jan. 1947-Feb. 1964-----	8238
reports-----	6481, 8414
Economic Opportunity Office:	
appropriations, 1965, proposal-----	17464
director, nomination of Robert S. Shriver, hearing-----	17886
establish—	
compilation of materials relevant to bill-----	15610
print as Senate document, report-----	15684
hearings-----	10306, 12126, 14152
law-----	17311
message from the President-----	8246
reports-----	14120, 15482, 15523

	Entry
Economic orders, Civil Aeronautics Board-----	3825
Economic planning, see Business.	
Economic poisons, see Pesticides.	
Economic policy:	
addresses-----	1854,
5933, 7674, 13504, 16901, 17163,	
19008, 19351, 21914.	
Communist China economic development problem-----	7200
community and economic development-----	11827
cybernetics and economic management, Czechoslovakian study-----	20302
economic development opportunities in Boone County, W. Va.-----	8017
economic opportunity act of 1964—	
address-----	21653
agricultural aspects, hearing-----	12116
appropriations to finance programs, 1965, proposal-----	17464
ARA program relationship (address)-----	11819
compilation of materials relevant to bill-----	15610
print as Senate document, report-----	15684
hearings-----	10306, 12126, 14152
law-----	17311
reports-----	14120, 15482, 15523
economic policies and practices—	
European capital markets-----	6191
European Economic Community subsidies to shipping, U.S. and foreign countries-----	15400
Sweden, unemployment programs-----	12012
Italian Socialists present their policy-----	1062
new era of economic challenge (remarks)-----	4412
Poland, current central industrial plan, tentative optimization-----	9112
policy of expansion (remarks)-----	21093
regional impact studies, progress and problems (address)-----	13825
Socialist countries, determination of level of economic development-----	2718
technology and national needs (talk)-----	8190
tight budget in expanding economy (address)-----	19366
USSR—	
international economic relations, translations-----	1041,
5168, 5402, 6923, 8975, 9263,	
11039, 11078, 11214, 12954,	
14518, 16466, 19852, 19929,	
19938, 20032, 20105, 20325,	
21479, 21636.	
optimal planning problems-----	10727
retail commodity turnover, principles of planning-----	16200
science and technology, proposals for improved use of advanced methods-----	12979
socialist economic management and production planning-----	11086
sovnarkhoz carries out preventive inspection-----	10747
system, translations-----	916,
940, 947, 1205, 1226, 2469, 2485,	
2647, 2785, 2880, 4956, 5018,	
5034, 5291, 5385, 6992, 7229,	
8908, 9238, 9355, 10727, 10832,	
10971, 10993, 10999, 11069,	
11086, 11101, 11133, 12651,	
12706, 12881, 12922, 14450,	
14533, 16075, 16110, 16136,	
16247, 16369, 16414, 16454,	
18233, 18279, 18309, 18506,	
18564, 19902, 20013, 20038,	
20283, 20357, 21556, 21577	



# INDEX 1964

Entry	
Economic policy—Continued	
Yemeni Arab Republic, develop- ment	20140
Economic Progress, Technology, and Automation, National Commis- sion on, <i>see</i> National Commis- sion on Technology, Automa- tion, and Economic Progress.	
Economic regulations, Civil Aeronau- tics Board	3429
Economic research (Chinese periodi- cal):	
translations	884,
1294, 2925, 5260, 7052, 11221, 12610, 12887, 16064, 16132, 18568, 19907, 20329.	
Economic research (North Vietnam periodical):	
translations	5272
Economic Research Service:	
agricultural economic reports	565,
4611-13, 6553-54, 8468, 10453- 455, 12307-309, 15835, 17900- 902, 19620, 21258-259.	
Agricultural Economics periodic re- ports	4218
appropriations, 1965, Agriculture Dept., hearings	10286
ERS-foreign series	2264,
6556-57, 8471-76, 10456, 12314- 316, 14172, 15837, 17907-910, 21261.	
ERS series	2260-63, 6555, 8469-70, 12310-313, 14168-171, 17903-906, 19621, 21260.
foreign agricultural economic re- ports	567-568, 2266, 4614, 6558, 14173-174, 15838, 19623, 21262.
reports, checklist	3316
Economic stabilization, <i>see</i> Stabilita- tion.	
Economics:	
American economic progress, the bar and patent system (ad- dress)	20715
American economy, patent system, and the bar (address)	16805
apprenticeship and economic change	4274
ARA research program	13664
CEMA members, structural shifts in economies	21636
do you know your economic ABC's?	
U.S. balance of payments, ex- planation of international ac- counts and how they affect our economy	15371
economic forces in United States	2962
economic-political ideas of Euro- pean social democrats, 1964	7250
economic redevelopment research	13663- 664, 17024-25
economics and public welfare, paper	7373
health series	7693, 16837
industrial, BDSA publications list	11878
Kiev administrative region, special- ized and overall development.	5023
Korea, Republic, administrative areas, statistics	20098
major problems of future, employ- ment, labor force growth, and productivity	1386
material incentive efficiency, cost indices of plan to increase, USSR study	2748
national progress through economic stability (address)	19350
national security, correspondence course offered by Industrial College of Armed Forces	12574
nuclear power, analysis and com- ments, 1964	19434

Entry	
Economics—Continued	
optimum, criterion, USSR study	18570
Poland, role of technical sciences in development of national economy, translation	18443
price and value in socialist econ- omy, USSR study	16024
private economy, output per man- hour, 1947-63, indexes	7417, 20445
raw materials in United States economy, 1900-61	6052
announcement and order form	8103
USSR—	
chemical industry	10900
irrigated agriculture, transla- tion	18468
system—	
appraisal of production in in- terbranch balance	20013
current developments, transla- tions	1035,
1124, 1215, 1319, 2508, 2621, 2744, 2870, 4885, 4984, 5103, 5210, 5321, 7005, 7130, 7217, 7327, 8917, 9058, 9152, 9269, 10723, 10854, 10942, 11031, 11134, 11231, 12665, 12792, 12909, 13005, 14489, 14639, 16051, 16103, 16186, 16276, 16305, 16467, 18192, 18335, 18487, 18544, 19847, 19920, 20114, 20189, 20351, 21410, 21486.	
structure and policy, transla- tions	916,
940, 947, 1205, 1226, 2469, 2485, 2647, 2785, 2880, 4956, 5018, 5034, 5291, 5385, 6992, 7226, 8908, 9238, 9355, 10727, 10832, 10971, 10993, 10999, 11069, 11086, 11101, 11133, 12651, 12706, 12881, 12922, 14450, 14533, 16075, 16110, 16136, 16247, 16369, 16414, 16454, 18233, 18279, 18306, 18506, 18564, 19902, 20013, 20038, 20283, 20357, 21556, 21577.	
Vietnam socialist economy achieve- ment campaign	2720
watershed protection and flood prevention, guide	11611
<i>see also</i> Production.	
Economics Branch, Commercial Fish- eries Bureau, report on	6703
Economies in National Government, Defense Dept. cost reduction program, report 1964	15828
Economists:	
employment outlook	9409
examination announcement	13808
USSR, mathematics and electronics at service of	1093
ECPD, <i>see</i> Engineers Council for Professional Development.	
Ecuador:	
economy, basic data	18171
education, Commission for Educa- tional Exchange and financing programs, agreement	1610
foreign trade regulations	8832
Jambell culture of south coastal area	18820
labor law and practice	5433
Eddy, John J., basic data on econ- omy of Spain	6850
Eddy, William H., flotation of barite- fluorspar ore from Tennessee	16641
Edelberg, Robert, electrophysiologic characteristics and interpreta- tion of skin potentials	5905
Edelman, Sidney, paper, June 1964	15971
Edema, cerebral intravenous hyper- tonic urea, evaluation	15237

# JANUARY-DECEMBER

	Entry
Eden Valley project: operations and maintenance charges, defer—	
law	8230
report	6330
Edgemont, S. Dak., geology of quad- rangle	21348
Edison-Maricopa area, Calif., geology and ground water	15957
Edison National Historic Site, general information	11463
Edith Nourse Rogers Memorial Veter- ans Hospital, designate, reports	10273, 15543
Editing, Armed Forces news style guide	17030
Editorials, broadcast editorializing, hearings	6363
Edlund, Vernal E., smelting copper reverberatory slags to recover iron of low copper and sulfur content	14762
Edman, Victor G., prices and spreads for fresh fruits and vegetables sold in selected markets, 1956- 62	7947
Education:	
acts of 1963, selected, compilation	4590
adult, civil defense course, illustra- tions, miniature	588
answer to human obsolescence (re- marks)	10035
application of cybernetics to ped- agogy, Rumanian study	5081
around the world, information	578-580, 597-14182, 19627-628
around the world, newsnotes	3795
automation in educational methods and techniques, USSR study	7252
challenge in attacking causes of juvenile delinquency (speech)	5762
change in a generation	19298
children in federally affected areas— annual report, 1963	6560
broaden assistance, hearings	19502
extend and amend law— hearings	396, 17884
law	21157
reports	15732, 19483
children of veterans who have war- time total disability— hearing	542
law	13909
report	513
children, research programs, studies in progress	17120
Chile	6563
commencement is time for sum- ming up (address)	2939
Communist China— science and technology, need to strengthen training in funda- mental techniques	4936
spare-time education for work- ers	15856
Communist, problems and science of psychology, USSR study	1328
comparative, studies (series)	6563, 6566, 14187, 17923
conditions and programs, reference, facts	8789
congressional pages, committee to study, create, report	19454
contribution to rated effectiveness of weather officers	20070
cooperative research program— automated teaching for retarded children	12321
newsletter	3369
cooperative research projects, 7 year summary, July 1, 1956- June 30, 1963	14180
crisis of our times in developing and conserving human intelli- gence (address)	13377

	Entry
Education—Continued	
culturally different youth, improv- ing English skills	2274
cybernetics in pedagogy and com- munications, USSR study	6963
data—	
Algeria	14182
Austria	578
Finland	580
Iceland	12322
India	579
Netherlands	585
Northern Ireland	584
Portugal	19627
Spain	586
Switzerland	19628
dilettians, educational oportuni- ties	21009
directory, 1962-63	2270
directory, 1963-64	6562, 8480, 15841
economic factors influencing educa- tional attainments and aspira- tions of farm youth	10453, 12307
education and AFDC, financial aid through public assistance to families with dependent chil- dren	11714
education and educational psychol- ogy, USSR studies	18197
education and engineer (re- marks)	1784
education and training, key to de- velopment of human resources	8786
education briefs	14186, 14192, 19635
education for citizenship in mod- ern world (address)	9805
educational manuals	553-556, 6537, 8462, 10443, 21248
educational media program	4620
eliminate unemployment and pov- erty through education (re- marks)	14665
exceptional children and youth, special education— personnel in State departments, Sept. 1963	4646
statistics 1957-58	2268
exceptional children, financial aid for professional preparation of educators	6580
exchange program— agreement with—	
Australia	20838
Belgium and Luxembourg	11644
Ceylon	20840
China	13478
Ecuador	1610
Federal Republic of Germany	9820
Greece	7779
Iceland	11631
Iran	1622
Liberia	15122
Norway	11634
Portugal	9838
Tunisia	7786
USSR	15118
American grantees, 1963, list— educational and cultural diplo- macy, 1962	15096 3145
Italy, experiment in international understanding	11616
planning and development, key contacts, interagency direc- tory	18098
State Dept. foreign visitor pro- grams, objectives, etc.	7768
U.S. cultural, artistic, student and leader exchanges, hear- ings	2112
facts and figures— 1962, grants, etc.	829
1963, grants, etc.	18153

# INDEX 1964

	Entry
Education—Continued	
failure in developing social consciousness in citizens (address).....	7353
Federal assistance, deny to institutions which practice racial discrimination, hearings.....	2110, 6514
Federal organization for conduct of programs, bibliography.....	141
for changing world of work, report of Panel of Consultants on Vocational Education, summary.....	2289
foreign understanding and interpretation of U.S. education, conference report.....	6566
France.....	577
Fulbright-Hays act, projects related to National defense education act.....	17917
graduate, financing.....	14184
handicapped children—	
and youth, organization and implementation of programs, 1964.....	17920
grant program for preparation of professional personnel.....	6567
preparation of professional personnel, program.....	19637
research and demonstration projects, grants-in-aid program.....	6568
Indian education (periodical).....	12538
Indians, statistics, 1963.....	836
indicators.....	3570
innovation and experiment.....	9701
international, publications.....	2285
Italian, progress and trends.....	8492
legislation enacted, etc., 88th Congress.....	21242
legislative achievements, 1963.....	6831
legislative landmarks—	
highlights, 88th Congress, Oct. 1963-Feb. 1964.....	12324
highlights of selected acts.....	6573
lifetime advantage.....	11287
literature of the profession, Educational Materials Laboratory report.....	581
NASA educational publications, list.....	3002, 11357, 20533
NASA opportunities for professional growth and career advancement.....	3003
NASA programs, hearings.....	4568
national defense education act—	
amend, hearings.....	19506
counseling and guidance training institutes program, policies and procedures manual.....	14191
educational media specialists, institutes for advanced study, manual.....	21267
English teachers, institutes for advanced study, manual.....	21267
extend and amend law—	
hearings.....	17646
law.....	21157
reports.....	15530, 15732, 17575, 19483
Federal grants, inadequacies in administration, GAO report.....	4763
graduate fellowships, programs, 1964-65.....	2275
graduate fellowships, your national defense graduate program.....	10477
guidance, counseling, and testing, progress 1958-63, report.....	17913
language and area centers—	
1st 5 years, report.....	19634
program in non-western languages.....	19633
language development program, research completed, etc., list.....	2276
language institutes program, 1964-65.....	4629

	Entry
Education—Continued	
national defense education act—	
Continued	
language laboratory facilities, technical guide, erratum.....	2272
modern foreign language fellowship program, 1965-66.....	17917
NDEA and higher education (periodical).....	3782
new educational media program, news and reports.....	17928
projects initiated under title 7, new educational media.....	6576
projects, Sept. 2, 1958-Apr. 30, 1964.....	21268
science, mathematics and foreign language instruction, financial assistance, guidelines, title 3 and 5-A, impact on schools.....	607
title 3, questions and answers.....	15855
national education improvement act of 1963, compilation, proposed changes under S. 580.....	10429
needs and opportunities in our society for educated women.....	21927
neighborhoods.....	2966-68
new media for instruction (series).....	2272
newsnotes on education around world.....	3795
occupational therapy students, Army opportunities.....	1766
opportunities for all (remarks).....	20862
parents, specialists, directory.....	1828
pedagogical science, CPSU, new program and problems.....	5363
pedagogical tasks in pioneer sections discussed, USSR study.....	14554
people act through community participation and by working together, exhibit depicts advances.....	1646
positive view of aging asks much.....	12325
poverty, target for education (address).....	6574
program for reduction of unemployed (remarks).....	14666
programs for gifted and talented, State resources and responsibilities, conference report.....	4651
public—	
Civil Rights Commission staff report—	
1963.....	11931
1964.....	21049
Government films for use, 1963.....	17929
International Conference.....	597
public school systems, directory, 1963-64.....	15841
United States progress, 1963-64.....	17921
publications, price list.....	3004
research and program specialist, examination announcement, discontinuance notice.....	6086
Rumania.....	10461
Rumania, youth in armed forces.....	21521
school life (periodical).....	4008
Scotland.....	2271, 8484
selected references.....	14193
special personnel in State education departments.....	4646
State governments, directory 1963-64.....	6562
State records and reports series, handbook 5.....	21270
statistics, digest, 1964.....	17914
Talent Development Project, 1964.....	6582
teacher exchange opportunities, 1965-66.....	15859
teacher preparation, 5 targets for next 10 years.....	8496
training activities under manpower development and training act.....	8786

	Entry
Education—Continued	
undergraduate, financing.....	8485
USSR—	
English-language materials, bibli-	
ography.....	17923
improving various areas.....	8868
methods and aims.....	7284
Moscow in May 1963, education	
and cybernetics, interchange of	
Soviet and U.S. ideas.....	17918
party educational work in Frun-	
zenskiy Rayon of Moscow.....	20122
pre-school education methods.....	12860
structure and decision-making.....	6581
translation.....	5176
why continuing programs for	
women?.....	5770
women, Committee on Education,	
report.....	7679
years, as prediction of technical	
training success.....	9983
youth employment act, education	
challenge (address).....	1363
see also Business education—Civil	
rights—Colleges and universi-	
ties—Curriculum—Elementary	
education—High schools—Nav-	
al education—Personnel serv-	
ices in education—Programmed	
instruction—Schools—Second-	
ary education—Technical edu-	
cation—Vocational educa-	
tion—also subjects taught.	
Education and Labor Committee,	
House:	
activities and accomplishments dur-	
ing 87th Congress.....	10304
calendar.....	3647
committee prints.....	4493
hearings.....	10304-305, 10307-309
2110, 4492, 4494, 6350-52, 10306,	
12126-127, 13998-999, 15586,	
17645-646, 19502-507, 21205.	
Investigations and studies, expenses,	
reports.....	6306
17585-586. 17591	
reports.....	4457,
6283, 12093-96, 12112, 13985,	
15482, 15498, 15517, 15530.	
Education Board of D.C.:	
employees, salaries, increase—	
law.....	17433
reports.....	15568, 17613, 17716
Education by television, see Televi-	
sion.	
Education Committee, President's	
Commission on Status of	
Women, report.....	7679
Education of the Deaf, International	
Congress on, see International	
Congress on Education of the	
Deaf.	
Education Office:	
annual report, 1963, on administra-	
tion of laws granting Federal	
aid to schools.....	6560
appropriations, 1965, supplemental,	
proposal.....	19529
budget, 1965, amendment.....	8255
bulletin 1963 (series).....	577,
583, 599, 603, 2273, 4616, 4644,	
4651.	
bulletin 1964 (series).....	589,
600, 2271, 6561, 6581, 10461,	
10464, 10470-472, 10474, 14181,	
14187, 14194, 14199, 17914,	
17918, 17923, 19630, 19632,	
19634, 19642, 21266, 21270.	
circulars.....	591-592,
598, 606, 2269, 4625, 4649, 6575,	
8481-83, 8494, 10459, 10467,	
12328, 14180, 15844, 17927,	
17929, 19639-640, 21265.	
conference, Mar. 7-8, 1963.....	19630

	Entry
Education Office—Continued	
cooperative research monograph se-	
ries.....	21274
cooperative research program, new-	
letters.....	3369
cooperative research programs in	
aging.....	7849
cooperative research projects, 7	
year summary, July 1, 1956-	
June 30, 1963.....	14180
education briefs.....	14186, 14192, 19635
financial assistance programs ad-	
ministered by.....	582
higher education publications, 1963,	
bibliography.....	8495
information on education around	
the world.....	578-580,
597, 14182, 19627-628	
International education, publica-	
tions.....	2285
miscellaneous series.....	4626-27,
6572, 17924	
miscellany series.....	10466
official journal.....	4008
professional opportunities, exami-	
nation announcement.....	6100
programs.....	2279
progress of education in United	
States, 1963-64, report.....	17921
publications—	
exceptional children and youth... 590	
1963.....	4644
secondary education.....	4631
selected, check list.....	574
research grants and contracts, pro-	
gramed learning and self-in-	
structional media.....	2287
schoolhousing survey, 1963.....	602
selected references.....	14193, 14197
special publication.....	4645
studies in comparative education... 6563,	
6566, 14187.	17923
Talent Development Project, goals	
and activities, 1964.....	6582
Educational and Cultural Affairs Bu-	
reau, foreign visitor pro-	
grams.....	7768
Educational associations, organiza-	
tions designated by Commis-	
sioner of Education as nation-	
ally recognized accrediting	
agencies and associations.....	15853
Educational boards and departments:	
State—	
Clearinghouse Exchange of publi-	
cations, secondary education	
personnel.....	14179
directors of programs for gifted	
and talented, conference re-	
port.....	4651
special education personnel.....	4646
teachers negotiate with their school	
boards.....	19642
Educational Exchange between United	
States and Ecuador, Commis-	
sion, see Commission for Edu-	
cational Exchange between	
United States and Ecuador.	
Educational Exchange between United	
States and Iran, Commission,	
see Commission for Educa-	
tional Exchange between	
United States and Iran.	
Educational institutions, see Colleges	
and universities—Schools.	
Educational Materials Laboratory, re-	
ports on new materials, anno-	
tated list.....	581,
6564-65, 14183, 15842	
Educational Media Branch, Educa-	
tion Office, program and pub-	
lications.....	4620



# INDEX 1964

Entry	
Educational Statistics, Advisory Committee of Users of, <i>see</i> Advisory Committee of Users of Educational Statistics.	
Educational Statistics, Advisory Panel of Users, <i>see</i> Advisory Panel of Users of Educational Statistics.	
Educational television, <i>see</i> Television.	
Educators, visiting from abroad, welcoming suggestions for schools and communities.	10476
Edwards, Corwin D., cartellization in Western Europe.	16872
Edwards, George C., Jr., nomination, hearings.	2243
EEC, <i>see</i> European Economic Community.	
EEG, <i>see</i> Electroencephalography.	
Elgrass, <i>Zostera marina</i> , bibliography.	10579
Efferent nerves, <i>see</i> Nerves.	
Efficiency ratings, job qualification ratings relation to performance ratings of basic training instructors.	20971
Effigy Mounds National Monument, general information.	16764
Egan, Robert L., guide to mammography.	16836
Egbert, Alvin C., regional analysis of production adjustment in major field crops.	1722
Egbert, Wyo., railroad accident.	8843
EGCR (experimental gas-cooled reactor), <i>see</i> Reactors (atomic).	
Eggs:	
business, Federal wage-hour law application.	7838
farm production, disposition, cash receipts and gross income, 1962-63, by States.	11645
foreign agriculture circulars.	3526
fresh fancy or grade AA, quality control program.	1706
futures trading and open contracts.	3547-48
grading manual.	11751
keeping drug residues out when using medicated feeds.	6737
multiple-occupancy warehouses for wholesalers, improved designs.	792
plants operating under inspection and grading programs, list.	4177
poultry and egg situation.	13557
production tests, United States and Canada, 1963 report.	3859
products, liquid, frozen, solid production.	1686
shell and frozen, futures, commitments of traders.	3436
shell egg grading and inspection of egg products.	3347
<i>see also</i> Spawn.	11768
Eglin Air Force Base:	
land conveyance to Fort Walton Beach, Fla., change designated use.	
law.	17247
reports.	366, 14113
Egypt, <i>see</i> United Arab Republic (Egypt).	
Ehlers, Janet G., Fortran program for computing principal moments of inertia of rigid molecule.	7508
Ehrenspeck, H. W., double-helix antenna, etc.	7960
Ehrlich tumor, <i>see</i> Tumors.	
Elchers, Theodore R., cooperative bulk fertilizer blending in upper Midwest.	15879

Entry	
Elcke, W. G., Jr., helicopter battery service simulator.	18810
Elde, Donald G., variation of pitch motion of vehicle in space environment due to fuel sloshing in rectangular tank.	14869
Eigenfunctions, calculation in problem of stability of plane polyeuille flow.	16717
Eigenvalues, <i>see</i> Eigenfunctions.	
Eighteenth century Venetian drawings from Correr Museum.	3054
Ellertsen, Donald E.:	
beryllium.	14729
lithium.	13111
zirconium and hafnium.	16648
Ellertsen, Nils A.:	
mineral industry of Maryland.	1414, 21700
mining methods and costs, Kimballton limestone mine, Standard Lime and Cement Co., Giles County, Va.	13107
Einstein, Thomas H., radiant heat transfer to absorbing gases.	1483-84
Eisenhart, Churchill, precision and accuracy of instrument calibration systems.	1496
Eisenhauer, Charles, engineering method for calculating protection afforded by structures against fallout radiation.	14938
Eisenhower, Dwight D., Library, <i>see</i> Dwight D. Eisenhower Library.	
Eisenhower trophy, NGB, announcement of winners, pamphlet.	20645
Eisenlohr, William S. Jr., discharge ratings for streams at submerged section controls.	18150
Eitel, Sally, relief.	21172
Ejectors, multiphase, for distillation desalination systems, study.	10680
Elastic constants for bending and twisting corrugation-stiffened panels.	20618
Elastic orifice automatically regulates gas bearings.	14800
Elastic strain, <i>see</i> Strains and stresses.	
Elastic structures, <i>see</i> Tissues.	
Elasticity:	
rock, modules determined by 4 methods.	21709
visco-elastic materials, vibration of sphere for determining dilatational constants.	10486
Elastomers:	
bonded to metal surfaces to seal electrochemical cells.	20554
potential use at cryogenic temperatures, evaluation.	15017
Elderly people, <i>see</i> Aged.	
Elections:	
Armed Forces voting information, 1964, pamphlet.	1757, 17029
campaign information, factual.	8404A, 14021, 19524
Chilean, Soviet reports.	20132, 20229
employee representation, conducted by NLRB, reports.	3759
Federal corrupt practices and political activities acts, as amended, revised text.	10357
print as Senate document, report.	8430
investigation, expenses, report.	6459
law guidebook, 1964.	10356
print as Senate document, report.	8431

	Entry		Entry
<b>Elections—Continued</b>		<b>Electric batteries—Continued</b>	
President and Vice President—		sea-water battery plus tunnel diode	
delegates to conventions, etc.,		converter as power source.....	5606
laws, etc., analysis.....	8404B	silver-cadmium battery develop-	
financing transition period be-		ment program.....	20520
tween administrations—		space batteries.....	9540
law.....	8216	Electric breakdown, <i>see</i> Electric dis-	
reports.....	4526, 6292	charges.	
presidential campaign, 1964, sus-		<b>Electric bridges:</b>	
pend equal time provisions of		capacitance - inductance - resist-	
communications act, report.....	12050	ance, instrument calibration	
register-vote commemorative 5-cent		procedure, technical manual.....	13364
postage stamp—		high resistance Mueller bridge, in-	
dedication (address).....	16810	strument calibration tech-	
poster.....	16814	nique.....	13353
Electric bibliography.....	7663	impedance electro-measurements	
Electric apparatus and appliances:		250 DA AN/URM-90, TS-400-	
airborne equipment, explosion-proof		C/U, instrument calibration	
testing techniques.....	7957	procedure, technical manual.....	13363
consumer information, price list.....	21842	precision guarded wheatstone, in-	
engineered performance standards		strument calibration tech-	
handbook.....	5773	nique.....	13351
equipment components, Federal		Wenner bridge.....	1531
item identification guides for		wheatstone bridge type of combusti-	
supply cataloging.....	12203	ble gas indicator, operation,	
supplements.....	3474	etc., safety data.....	18616
maintenance, repair, and alteration,		<b>Electric cables:</b>	
civil aeronautics manual.....	3324	flat, evaluation for interconnecting	
merchant vessel equipment, Coast		system components, final re-	
Guard approved list.....	19345	port.....	7659
preventive maintenance for elect-		flexible coaxial cable.....	13345
rical facilities.....	11847, 21003	<b>Electric charges, <i>see</i> Space charges.</b>	
safety rules for installing and		<b>Electric circuits, <i>see</i> Circuits.</b>	
using equipment in coal mines.....	20476	<b>Electric communications, <i>see</i> Telecom-</b>	
TSSA power systems, overpricing		<b>communications.</b>	
of contracts with Westing-		<b>Electric conductivity:</b>	
house, GAO report.....	8730	atmospheric, measurements in Shen-	
USSR industrial development,		andoah National Park, Va.....	5612
translations.....	1109, 2521,	electron spectrum of superconduct-	
2715, 2760, 5062, 5109, 5118,		ing compounds, special	
5302, 5401, 6938, 7015, 7047,		features.....	4902
7256, 14052, 16121, 16428,		flow of fluid in plane magnetohydro-	
16512, 16530, 18577, 20184,		dynamic channel.....	20630
21607.		in-pile Hall coefficient and conduc-	
<i>see also</i> names of special apparatus		tivity measurements on zone-	
and appliances.		refined P-type silicon.....	5391
<b>Electric arc:</b>		modified filter prevents conduction	
air heater—		of microwave signals along	
equilibrium sonic-flow method for		high-voltage power supply	
evaluating performance.....	9574	leads.....	13162
magnetically rotated, employing		molten systems of uranium tetraflu-	
strong magnetic field and		oride and thorium fluoride with	
copper electrodes, description		alkali fluorides.....	18684
and operational procedures.....	1463	movement of fluid in plane channel.	
arc-discharge metallurgy, USSR		specific, changes of minerals and	
translations.....	13011	rocks with their age, USSR	
constricted-arc supersonic jet, eval-		study.....	12917
uation.....	7506	<i>see also</i> Electric resistance.	
reentry environment simulators,		<b>Electric conductors, exploding, final</b>	
operating capabilities.....	18723	report.....	13333
shape of magnetically rotated col-		<i>see also</i> Semiconductors—Supercon-	
umn in annular gap.....	21756	ductivity—Superconductors.	
<b>Electric batteries:</b>		<b>Electric connectors, <i>see</i> Connectors</b>	
bibliography.....	11659	(electric).	
dry cell—		<b>Electric current converters, high</b>	
current industrial reports, change		power static, optimization	
sheet.....	1811	study.....	18140
deceptive use of leakproof, guar-		<b>Electric currents, instrument for elec-</b>	
anteed leakproof, etc., as de-		tronic differentiation of cur-	
scriptive, FTC trade regula-		rent-voltage characteristics.....	21760
tions rule.....	12413	<b>Electric discharge:</b>	
<b>fuel cells—</b>		high-performance electrostatic dis-	
continuous feed system.....	5918	charger for helicopters.....	13493
dual membrane and osmotic still,		initiation of electrical breakdown	
development.....	13141	in vacuum.....	5590
flow-through porous electrodes		<b>Electric energy, <i>see</i> Electricity.</b>	
for redox couples.....	7664	<b>Electric engineering:</b>	
problem, current status, USSR		East European scientific abstracts.....	21416
study.....	2516	Navy design manual, changes.....	3198
regenerative, molten-salt, thermo-		Soviet and Chinese articles, English	
electric system.....	18768	abstracts.....	3443
status report.....	3124	USSR scientific abstracts.....	21389, 21490
helicopter battery service simu-			
lator.....	18810		

# INDEX 1964

	Entry
Electric engineers:	
career opportunities, Veterans Administration	20870
Yugoslavia, graduated from electrical engineering faculty of University of Belgrade, directory, 1923-56	2499
Electric equipment, <i>see</i> Electric apparatus and appliances.	
Electric fans:	
circulating, bracket and desk type, Federal standard	19711
current industrial reports	1812, 15308
Electric fields:	
atmospheric, measurements in Shenandoah National Park, Va.	5612
ionized gas, transport	11406
measuring at sea, USSR study	12946
Electric generators:	
Hall generators sensitivity indices, operation in civil defense emergency hospital	7582
overpricing B-58 electrical power systems purchased from Westinghouse Electric Corporation by General Dynamics Corporation under cost-plus-a-fixed-fee prime contract, Air Force Dept., GAO report	20756
<i>see also</i> Thermionic converters.	8728
Electric heating:	
classification bulletin	15018
insulation for electrically heated and cooled houses, proceedings of conference	15198
Electric insulation, <i>see</i> Insulation.	
Electric lamps:	
current industrial reports	6041
fluorescent, ballasts, current industrial reports	3391, 6043
light bulbs imported in sets, excise tax, report	8318
mercury vapor lamps, igniting system protects transistorized sustaining supply	16069
production, current industrial reports	3391
shipments, current industrial reports	3390
Electric lighting, <i>see</i> Electricity.	
Electric lines:	
construction, specifications and drawings for transmission voltages	18932
intercity communications lines of civil agencies, costs resulting from failure to consolidate leasing, GAO report	21343
rural lines (periodical)	3998
transmission, construction contract, labor and material	18932
Electric measurements:	
conference on automatic control and methods of electrical measuring, USSR study	19948
measuring natural electrical field at sea, USSR study	12946
self-calibrating system, design, study	9687
Electric measuring instruments, six-dial universal ratio set, instrument calibration techniques	13352
Electric meters:	
Hewlett-Packard 430C and 430B-95B and Sperry Microline 31A1 microwave power meters, instrument calibration procedure, technical manual	11520
TS-230/AP, TS-230A/AP, TS-230B/AP frequency power meters, instrument calibration procedure, technical manual	11522
watthour meters, application guide	9752
<i>see also</i> Multimeters.	

	Entry
Electric motors:	
d.c., brushless, satellite application	7517
single phase, for farm use	19070
Electric networks, RC, unity-gain complex-zero, synthesis	11495
Electric potential, <i>see</i> Electromotive force.	
Electric power distribution, <i>see</i> Electricity.	
Electric power plants:	
dispersion of discharges in atmosphere, method for calculations, USSR study	4912
hydroelectric projects, Colorado River below Glen Canyon Dam, preserve jurisdiction of Congress over construction—	
hearings	12271, 14009
law	17350
reports	10407, 13975, 17543
<i>see also</i> Nuclear reactor power plants.	
Electric railroads, transportation statistics, 1962	2466
Electric relays, relays and industrial controls, current industrial reports	1819, 17102
Electric resistance:	
brines from oilfields in east Texas, resistivities	11328
cerium metal from 4° to 300°K	14761
four-point probe resistivity measurements on semiconductor samples, correction factor tables	9635
high resistance Mueller bridge, instrument calibration technique	13353
measurement of bulk resistivity of semiconductor materials for electron devices, bibliography	21785
measurements on rectangular bar-shaped semiconductor samples, comparing 2-point and 4-point probes	13276
precision guarded wheatstone bridge, instrument calibration technique	13351
rocks at high temperatures, USSR study	903
six-dial universal ratio set, instrument calibration techniques	13352
tissue resistivity, thoracic cage impedance measurements	9987
Electric slip rings, rolling element, for vacuum application	9608
Electric sorting machines for tart cherries	19053
Electric switchgear:	
circuit switchers latching relay in response to signals of different polarity	13194
current industrial reports	1819, 17102
double-throw device switches 2 lines quickly	7485
liquid switch is remotely operated by low dc voltage	13201
power silicon gate controlled switch, development	18720
stepping switch with simple actuator provides many contacts in small space	13163
Electric transformers:	
double-tuned transformer, development at NBS	9639
power and distribution, transformer industry, review of 1963, outlook for 1964	4331
Electric utilities:	
depreciation practices, 1961, classes A and B privately owned companies	6641
statistics, 1961, publicly owner systems	663

	Entry
<b>Electric utilities—Continued</b>	
statistics, 1962—	
classes A and B privately owned	
companies	8552
publicly owned systems	19690
systems classified as public utilities	
under Federal power act, list	12393
<b>Electric waves:</b>	
electromagnetic propagation in cold,	
collisionless atomic hydrogen	
plasma	11379
electromagnetic scattering cross	
sections modification in reso-	
nant region, symposium rec-	
ord	19189
frequency ranges for existence in	
cold, collisionless hydrogen	
plasma	11403
nonlinear interaction of electromag-	
netic wave with time-dependent	
plasma medium	13638
plane electromagnetic waves pass-	
ing through isotropic inhomog-	
eneous plasma slab at arbit-	
rary angles of incidence, gen-	
eralized treatment	14901
power of invisible waves, USSR	
study	980
vertically polarized plane electro-	
magnetic waves, interaction	
with plasma	20602
see also Radio waves.	
<b>Electric wire and wiring:</b>	
devices and supplies, current indus-	
trial reports	15313
exploding conductors, final report	13333
Federal item identification guides	
for supply cataloging	12293
supplements	3474
<b>Electrical, see headings beginning</b>	
Electric.	
<b>Electricians:</b>	
aviation electrician's mate 1 & C,	
Navy training course	5580
construction, 3 & 2, Navy training	
course	5581
employment outlook—	
construction	7383
maintenance	9434
mate 3 & 2, Navy training course	11482
<b>Electricity:</b>	
aluminum for cryogenic electromag-	
nets, electrical properties	18807
Amistad Dam project, market power	
generated—	
law	1966
report	493
basic, fundamentals of electronics	20685
Bonneville Power Administration,	
define marketing area—	
law	17410
reports	2089, 17397
Bonneville power generation and	
sales statistics	8098, 19272
costs for driers in cotton gins,	
Arkansas and Missouri	2261
direct conversion of chemical energy	
into electrical energy, prob-	
lem	5531
electric light and power occupa-	
tions, employment outlook	9443
electric power and electrotechnical	
industries of USSR, develop-	
ment	5000
electric power distribution systems,	
operation at naval shore fa-	
cilities	11733
electric power statistics	3431
electric sleep treatment, effective-	
ness in certain occupational di-	
seases	966
explorations, principles of, USSR	
study	6983
Federal power act, regulations	12396

	Entry
<b>Electricity—Continued</b>	
fuels and electric energy consumed	
in manufacturing industries,	
1962, census of manufactures,	
1963	17078
generation of electric power and	
simultaneous desalination of	
water by nuclear power, USSR	
(address)	20026
geothermal power, economic evalua-	
tion	18670
insufficient power supply cause of	
poor utilization in Soviet ag-	
ricultural production	21568
local electric systems, jurisdiction	
of FPC, amend act—	
hearings	15804
report	17712
national electric rate book—	
664-672,	
2322-24, 3764, 4703-9, 10524-	
527, 12394-395, 14246-251,	
15894-899, 17980-983, 19691-	
701, 21305-309.	
Pacific Northwest consumers pref-	
erence, reports	6376, 15546
Passamaquoddy project and upper	
Saint John River hydroelectric	
power development, authorize,	
hearing	17890
appendix material	17889
Passamaquoddy tidal power project,	
values (remarks)	844
power and distribution equipment,	
Federal item identification	
guides for supply cataloging	12293
supplements	3474
power distribution, accomplish-	
ments of Federal agencies (ad-	
dress)	840
power requirements for high-capacity	
cotton gins in Yazoo-Miss-	
issippi Delta	7892
power supply and distribution, engi-	
ning manual	6593, 15871
principal electric facilities, maps—	
Alaska, Hawaii, Puerto Rico, Vir-	
gin Islands	680
Great Lakes region	674
North Central region	675
Northeastern region	673
Northwestern region	676
South Central region	678
Southeastern region	679
Southwestern region	677
purchased by REA borrowers,	
1963	9751
retail prices and indexes	3978
Rumania, electrotechnical indus-	
try, translations	19841
rural—	
audit of REA borrowers' account-	
ing records	3122
borrowers' general funds, levels	
as related to advances and	
accelerated payments, REA	
bulletin	18933
borrowers, statistical report,	
1962	5675
farms electrified with central	
station service	20777
financing, hearing	15578
forward look to future (re-	
marks)	11597
materials acceptable on systems	
of REA electrification borrow-	
ers	7723, 16852
program for growth (remarks)	13434
publications, price list	15036
REA distribution line extension,	
construction contract	7722
REA Federal expenditures under	
electric loan program, possi-	
bilities for reducing, GAO	
report	2403



# INDEX 1964

	Entry
<b>Electricity—Continued</b>	
rural—continued	
REA recreation loan policy, hear- ing	387
rural lines (periodical)-----	3998
statistical bulletin-----	3748
sales statistics, TVA retail dis- tribution-----	3432
Siberia, hydroelectric power de- velopment-----	21420
Stanford accelerator power supply, hearing-----	10148
stimulation of heart in atrio-ven- tricular blocks, USSR study-----	12731
stimulation of heart, USSR study-----	9357
tax, on surplus commodity housing, agreement with France-----	16876
technologies, job descriptions and techniques for determining courses of study-----	10466
thrust systems for space station drag cancellation-----	20578
TVA-----	
municipal and cooperative dis- tributors, 1963 operations-----	3171
power, 1963-64-----	21902
sales statistics, retail distribu- tion-----	3432
valley of light, 1933-1963-----	21904
typical bills, residential, commer- cial and industrial services-----	4702
USSR electric power, transla- tions-----	2533
2626, 4945, 5088, 6912, 8928, 12605, 12769, 14427, 16267, 18469, 20089, 20280, 21420, 21450, 21568.	
<i>see also</i> Atmospheric electricity— also headings beginning Elec- tric and Electro.	
Electrocardiograms, monitoring ac- tively exercising subjects, simple, inexpensive way-----	19178
<i>see also</i> Vectorcardiograms.	
Electrocardiography in sports medi- cine, USSR study-----	2876
Electrocardiology, <i>see</i> Cardiology.	
Electrochemistry:	
galvanostagometry, technique based on negative pressure of liquids for investigating phenomena at electrode-----	5894
oxidation of titanium diboride-----	16715
recovery of cobalt-nickel alloy from superalloy scrap-----	13121
technical exploitation of electro- chemical phenomena under sea- water conditions, USSR study-----	18370
Electrodeposition:	
molybdenum metal from molten electrolytes-----	13120
nickel-Al <sub>2</sub> O <sub>3</sub> alloys, dispersion-hard- ened effects-----	7665
Electrodes:	
applying electrodes of implanted electric stimulator, USSR study-----	1163
auxiliary silver, eliminates 2-step voltage discharge characteris- tic of silver-zinc cells-----	14826
carbon, porous, demineralization of saline water by electrically- induced adsorption on-----	8802
consumable, electrosag melting, USSR study-----	10989
dual membrane fuel cell and os- motic still, development-----	13141
electrochemical phenomena investi- gated with galvanostagometry, new technique based on nega- tive pressure of liquids-----	5894
flow-through porous, for redox com- plexes-----	7664

	Entry
<b>Electrodes—Continued</b>	
improved electrode gives high-quality biological recordings-----	14821
materials for thermionic convert- ers, study-----	11496
nonpolarizing, for detecting slowly varying biopotentials in in- ternal cavities-----	9627
porous carbon, demineralization of saline water by electrically in- duced adsorption-----	10676
slag composition effect on melting of electrode of large cross sec- tion in electrosag process, USSR study-----	1237
Electro-dewatering tests of Florida phosphate rock slime-----	13127
Electrodynamics, cosmic, fundamen- tals-----	9624
Electroencephalograms, aerospace medicine, EEG in aircrew and astronaut selection-----	7998
Electroencephalography:	
current methods, of encephalo- graphic analysis, USSR study-----	8864
EEG changes during cardiac sur- gery under conditions of artifi- cial circulation and compari- son with postoperative neuro- logical picture-----	11234
Electroerosion machining of metals-- electroforming:	8007
ellipsoidal optical reflectors-----	20544
high purity, superior metal models yielded-----	7480
Electrogastrography, analysis of elec- trogastragram and its variants in healthy persons during di- gestion, USSR study-----	1179
Electrolysis:	
amalgam refining of cadmium-----	7434
continuous electrowinning of ce- rium metal from cerium ox- ides-----	7441
manganese concentrates, electro- lytic recovery from solution-----	13118
molten salt electrolysis of metals, infrared analysis of gases pro- duced-----	14758
uranium dioxide to uranium metal in fluoride melts-----	11340
Electrolytes:	
acid, dual membrane fuel cell and osmotic still development-----	13141
aqueous, pure and mixed, high- temperature transference num- bers-----	8799
caloric cost and fluid and electro- lytic balance in simulated sub- arctic survival situations-----	19140
Electrolytic cells:	
fuel cells, status report-----	3124
lead acid, morphology of Pb <sub>3</sub> in po- sitive plates-----	15007
leakproof sealing with elastomers bonded to metal surfaces-----	20554
silver-zinc, 2-step voltage discharge eliminated with auxiliary sil- ver electrode-----	14826
sulfate cycle, diaphragms for-----	5615
titanium-refining cells, develop- ment-----	11338
Electrolytic separation processes, tungsten from western schee- lite-----	18695
Electromagnetic acceleration of vari- able-mass plasma-----	21762
Electromagnetic attitude control sys- tem study-----	11349
Electromagnetic current meter, use in arctic waters, USSR study-----	10914

	Entry
<b>Electromagnetic fields:</b>	
earth's rapid pulsations and processes in upper atmosphere.....	9359
electron gas theoretic techniques.....	11437
liquid metals, USSR study.....	19988
near apex of wedge surface, calculations.....	3051
<b>Electromagnetic radiation, polarized, partially, coherence properties, geometric study.....</b>	<b>17007</b>
<b>Electromagnetic waves, see Electric waves.</b>	
<b>Electromagnetism:</b>	
antipodal image of electromagnetic source.....	13640
attitude control system study, addendum report.....	11850
earliest electromagnetic instruments.....	21799
<b>Electromagnets:</b>	
cryogenic, electrical properties of aluminum resistivity.....	18807
degradation effects in short samples of hard superconductors.....	14878
<b>Electromechanically operated camera shutter provides uniform exposure.....</b>	<b>9545</b>
<b>Electromotive force:</b>	
nuclear membrane potential of nerve cells, USSR study.....	11227
skin potentials, electrophysiologic characteristics, etc.....	5905
<b>Electromyograph:</b>	
human skeletal musculature in normal and pathological state.....	5096
investigation of Bell's palsy victims, USSR study.....	1172
pickup unit, small capacity, modified method for recording muscle contractions.....	10836
<b>Electron beams:</b>	
melting system for metals.....	7430
melting, USSR study.....	20420
welding in industry, USSR study.....	14512
<b>Electron gas, magnetized quantum field theoretic techniques and electromagnetic properties.....</b>	<b>11437</b>
<b>Electron heating, seeling and ion slip effect in magnetohydrodynamic generator.....</b>	<b>7523</b>
<b>Electron microscopes, sunflower seeds and accumulation of reserve substances study, USSR.....</b>	<b>987</b>
<b>Electron microscopy:</b>	
all-Union conference.....	2811
cellulose, USSR study.....	2524
chondrogenesis during long bone regeneration, USSR study.....	2476
<b>Electron spin, see Spin (atomic).</b>	
<b>Electron tubes:</b>	
circuits, Navy aeronautical electronic equipment handbook.....	9683
cross index and type identification, military standardization handbook.....	4604
industry, review 1963, outlook for 1964.....	6024
technology and electron emission, physics of.....	7995
test sets—	
TV-7/U, TV-7A/U, TV-7D/U, instrument calibration procedure, technical manual.....	11518
TV-10A/U, instrument calibration procedure, technical manual.....	11517
<b>Electronic circuits, see Circuits.</b>	
<b>Electronic computers:</b>	
ALGOL-60 converter, USSR study.....	9229
algorithm for use with digital process-control computers for determining time at which blow-out should stop when given carbon content is reached in Bessemer converter.....	16440

	Entry
<b>Electronic computers—Continued</b>	
<b>analog—</b>	
approach to V/STOL simulation employing variable-stability helicopter.....	5509
simulation of helicopter and V/STOL aircraft, study, equations of motion, etc.....	21826
smoothing of electrical signal data by filtering.....	1681
synthesis of constant linear dynamical systems with bang-bang controller, technique.....	16724
variable coding for constant percentage error.....	9605
arrangement of intermediate information when computing on nonerasing Turing machines.....	4922
BESM-2, tidal component for Pacific Ocean water area, USSR study.....	957
BOUMAC, macro-programming system for scientific computation.....	5549
Burroughs DS25 modular data-processing, NABUR, NAREC assembler.....	20708
calculating national fire-danger rating spread index.....	12456
calibrating and testing gravity model.....	5669
computer-aided learning of sound identification, experiments.....	15008
control systems, continuous models of excitable media, USSR study.....	10876
controls in open-hearth and continuous casting, USSR studies.....	9291
determination of stability derivatives from flight test data by means of high speed repetitive operation analog matching.....	11786
determining high-frequency phase stability.....	14813
<b>digital—</b>	
computer for training purposes (ENC), USSR study.....	11118
EGCR temperature and neutron transient analysis, ETNATA.....	15280
execution of LGP-30 machine-language codes on NAREC computer.....	13325
general-purpose, development at Computer Center of Bulgarian Academy of Sciences.....	12699
logic elements provide additional functions from analog input.....	14822
mathematical modeling of some technological processes.....	5355
prolate radial spheroidal wave functions, NAREC code for calculating.....	13326
simulation of helicopter and V/STOL aircraft study, equations of motion, etc.....	21827
spheroidal wave functions eigenvalues and expansion constants, calculating.....	13324
storing and retrieving information (AI-2048), excerpts from USSR book.....	5244
techniques for radar land mass simulation.....	1528, 11489
tracking system for automatic reader.....	11056
use in diagnostics of nervous diseases, USSR study.....	11235
use in forming trains, compilation of plan, USSR study.....	12978
use of automatic devices in control units.....	6090
East European scientific abstracts.....	21393
FATT, transient temperature computer program for EGCR core.....	11858

# INDEX 1964

Entry	
Electronic computers—Continued	
foreign developments, translations, organization, application of computers in coding and machine translation	1018
geologist's companion, USSR study	7023
geological nature of information modelling	2886
high density optical memory drum	11783
high speed memories, USSR study	16038
high speed, tunnel diodes, application	16046
hydraulics use, USSR seminar	10885
IBM coded, plotting circles of constant overpressure around targeted points, program	21786
IBM 1620, preselect address unit	11859
IBM 7090—	
n-body code, Fortran code for solution of space mechanics problems	1453
program for ionospheric mapping by numerical methods	3048
input, factors influencing design of original-document scanners	18811
investigation of continuous models of control systems, USSR study	9138
jet-plumming interference by computer stimulation of measured flight motions of 2 RAM A 4th stages	3016
logic circuit will fit on single silicon chip	14809
M-2, tape-drive unit for magnetic tapes, USSR study	20025
nonlinear processes, adaptive-predictive modeling	20521
numerical treatment of Orr-Sommerfeld equation for case of plane poiseuille flow	16717
octal codes, accounting program developed as byproduct of forest growth studies	14323
operating personnel, employment outlook	9415A
optimized printer plotting system, 7090 (FORTRAN) and 1401 (SPS) subroutines—	
instructions for users	11383
systems programmers manual	11384
optimum computerized allocation system development	13687
PERT system, NASA-PERT C computer systems manual	18725
physical and chemical systems, simulation and control, USSR studies	18331
program library, Public Roads Bureau	7713
programming—	
adaptive techniques for circuit design	20072
analysis and design of welded steel girders	13426
automation, USSR studies	19959, 21485
dynamic, deriving and optimizing method, USSR study	18576
fitting surfaces to assay and other data by regression analysis	18691
meteorology, USSR study	20222
needs for automated laboratory for psychological research	1736
NELIAC-N tutorial report	5610A
oceanography	21811
reliability of manufacture, USSR study	20216
response and feedback techniques for automated training of visual identification skills	20703
sharing plan, Philadelphia, Pa., regional area	140
simulation system, programming design manual	11490

Entry	
Electronic computers—Continued	
source data automation systems, mechanizing paperwork	13266
Soviet ideas on interrelationship of people and machines	10850
technology—	
and cybernetics, USSR study	5113
Crowe memory elements, superconductive USSR study	16326
mathematical problems, USSR studies	7053
use to control national economy, USSR study	16327
traffic assignment manual for application with large, high speed computer	15073
transfluxor circuit amplifies sensing current for memories	9550
uses—	
calculating chemical composition of iron being poured into converter	16202
determining forest investment rates-of-return	8694
law field, USSR study	16500
technical supply, USSR study	12674
USSR equipment	16113
USSR scientific abstracts	21388
USSR studies	16312
vibration finishing of edges of punched parts, Communist Chinese study	11088
Electronic counters, instrument calibration procedure, technical manual	11490
Electronic data processing systems:	
ADP training, services and sources of information, 1964-65, directory	19333
air route traffic control centers, Boston, Mass., and Washington, D.C., inadequate administration by FAA, GAO report	8723
automatic data procedure of rail form A, 11-63 using IBM 7090, textual explanation	14403
automatic data processing case history, Electronics Supply Office, Navy Dept.	15294
automatic data processing of highway form B, 6-62, using RCA computer, procedure	10713
automation, spacecraft telemetry test stand for Explorer XVII	13239
Burroughs D825 modular computer, NAREC assembler	20708
codes for California wildland plants	8661
costs in sale and leaseback by Aerojet-General Corporation, Sacramento, Calif., Defense Dept., GAO report	21335
costs of leasing by—	
Aerospace Division of Martin Marietta Corporation, GAO report	8735
Bacchus Works, Hercules Powder Co., by Defense Dept., GAO report	19763
Boeing Co., Airplane Division, GAO report	10618
Chrysler Corporation, GAO report	10621
Continental Aviation and Engineering Corporation, GAO report	10622
General Dynamics/Astronautics, division of General Dynamics Corp., San Diego, Calif., Air Force Dept., GAO report	19764
General Electric Co., Light Military Electronics Dept., Defense Dept., GAO report	18095
costs of leasing rather than purchasing at—	

# JANUARY-DECEMBER

	Entry
Electronic data processing systems—	
Continued	
Evanston Commodity Office,	
Agricultural Stabilization and	
Conservation Service, GAO	
report	10620
Jet Propulsion Laboratory, GAO	
review	10597
Kirtland Air Force Base, GAO	
report	4758
White Sands Missile Range, GAO	
report	794
curricula, business, peripheral	
equipment occupations	10631
Defense Department, unnecessary	
procurement and supply man-	
agement costs, GAO review	10758
engineering, science, and business,	
suggested techniques for deter-	
mining courses of study	8481
Federal Government manpower re-	
quirements	2942
Federal Government use, inventory,	
1964	15600
Federal item identification guides	
for supply cataloging	12296
supplements	3477
Fortran programs—	
analysis of ellipsoidal measure-	
ments and calculations of re-	
flexion coefficients from thin	
films	13277
calculations for comparing 2-	
point and 4-point probe resist-	
ivity measurements on rec-	
tangular bar-shaped semicon-	
ductor samples	13276
code for solution of space me-	
chanics problems on IBM 7090	
computer, n-body code	1453
computing principle moments of	
inertia of rigid molecule	7508
DRC, direct reaction calculation	7537
F distribution, calculation of	
percentage points	19161
spin zero elastic scattering with	
nuclear optical model, anal-	
ysis	9570
STX, program for estimates of	
tree populations	18083
functional approach, organization	
and administration	681
leased automatic system in use at	
Sandia Laboratory, AEC sav-	
ings in purchasing, GAO	
report	10616
management and administration in	
Federal Government, GAO	
review	10615
mark-sense cards used for collect-	
ing occupational information	15233
materials property development	4225
mechanization and automation of	
processing of oceanographic	
observations, conference,	
USSR	10893
optimized printer plotting system	
consisting of complementary	
7090 (FORTRAN) and 1401	
(SPS) subroutines—	
instructions for users	11383
systems programmers manual	11384
Philadelphia Naval Shipyard, in-	
creased costs from ineffective	
use in supply management,	
GAO review	18090
plan for teaching teachers	8490
purchase of leased components in	
use at military installations,	
GAO report	6781
reading machines, employment	
effects	2943
SDA equipment guide	18501
Social Security Administration,	
accounting operations	13451

	Entry
Electronic engineers, job types in Air	
Force Systems Command	13634
Electronic equipment:	
airborne use, explosion-proof test-	
ing techniques	7957
components, Federal item identifi-	
cation guides for supply cata-	
loging	12293
supplements	3174
cost of inefficient and uneconomical	
supply and maintenance prac-	
tices, 8th United States Army,	
Korea, Defense Dept., GAO	
report	10600
designer's shock and vibration guide	
for airborne applications	1750
electronic assembly rack panels	
snaps on and off	14828
engineered performance standards	
handbook	5773
installation and maintenance, test	
methods and practices, Navy	
handbook	11601
market in Western Germany and	
Berlin	8102
market information on products—	
Australia	21066
Denmark	21069
Mexico	21083
Spain	21067
Sweden	21068
United Kingdom	21070
medical devices, USSR studies	16211
medical, housings, USSR study	6943
miniature parts, handbook	13440
non-computer, maintenance, project	
FIST, fault isolation by semi-	
automatic techniques	18805
patents, USSR	1207
reliability, RADC notebook, revised	
pages	69
shipboard, maintainability design	
criteria handbook for design-	
ers	20781
test equipment, military standard-	
ization handbook	19617
troubleshooting—	
strategies, evaluation	11403
systematic, training manual	13321
uneconomical procurement under	
contract with Grumman Air-	
craft Engineering Corporation	
by Air Force, GAO report	2406
welded electronic module fabrica-	
tion	14862
see also special types of equipment.	
Electronic fire weather station	8659
Electronic measuring instruments:	
Seebeck coefficient and resistivity,	
system for measuring	20711
wool staple length recorder, descrip-	
tion	13590
Electronic Systems Division, techni-	
cal documentary reports	63-64,
1736, 5890-91, 7989, 9980-81,	
11798, 16994, 20957.	
Electronic technicians, 3, Navy train-	
ing course	3078
Electronics:	
at service of economist, USSR	1093
automation and programming,	
USSR studies	16044
basic, fire control technician train-	
ing, trainees' guide	20678-679
battery, validation of experimental	
selection of Army personnel	21008
circuit analysis, AF manual	19436-137
clinical medicine problems, achieve-	
ments, USSR study	11045
constructive optimal coding meth-	
ods for noisy channels, USSR	
study	9363



# INDEX 1964

Entry	
<b>Electronics—Continued</b>	
East European journals, abstracts...	984, 1174, 1216, 1308, 1345, 2700, 2781, 2840.
East European scientific abstracts...	4966, 5070, 5196, 5232, 5902, 6954, 7338, 8982, 9190, 9132, 9224, 9368, 10809, 10872, 11000, 11064, 12644, 12721, 12739, 12867, 12889, 12908, 12942, 12953, 13010, 14426, 14524, 16043, 16085, 16218, 16461, 16541, 18215, 18424, 18527, 19982, 20142, 21416.
electronic state of diatomic molecules	14890
fundamentals	20685-691
tables and master index	20692
instrument for electronic differentiation of current-voltage characteristics	21760
introduction, Navy training course	5584
Japanese industries	21078
manufacturing occupations, employment outlook	9444
microelectronic logic design, MHIR-PCM telemetry system, practical example	14856
PACAF basic bibliographies	1741
physical bases of cathode electronics conference, USSR, proceedings	16489
recent developments abroad, USSR study	2919
responsible for technical developments in our economy (address)	8183
semiconductor technology and microelectronics, USSR study	5307
Soviet and Chinese articles, English abstracts	3443
technologies, job descriptions and techniques for determining courses of study	10466
USSR, scientific abstracts	1016, 2733, 5169, 9035, 11240, 16198, 18193, 18498, 20092, 21389, 21490.
see also Electronic equipment—Radio-electronics.	
Electronics Supply Office, Navy Department, automatic data processing case history	15294
<b>Electrons:</b>	
bombardment ion thruster—experimental evaluation of size effects on steady-state control properties	20597
filament deterioration	11382
heavy molecules as propellants—steady-state control properties	7493
devices, measurement of bulk resistivity of semiconductor materials, bibliography	7538
dose rate, penetrating of outer belt, USSR study	21785
electron paramagnetic resonance method in biochemistry, USSR study	10719
emission—	18362
and electron tube technology, physics of	7995
field, Soviet research 1960-63, annotated bibliography	5550
USSR study	3035
energy spectra and angular distributions of electrons transmitted through sapphire foils	9539
high energy—	
accelerator installations shielding	14932
radiation damage to semiconductor	14775

Entry	
<b>Electrons—Continued</b>	
impact excitation of hydrogen atom to 2s and 2p levels, theory	13220
ion recombination in nitrogen, air, and argon, microwave interferometer measurements, errata	1452
ionospheric concentration, using artificial satellites for measurements, USSR study	19874
ionospheric density, use of hf lunar reflection circuit in study	5609
irradiation, effect on properties of Echo II laminate	21765
mean electron density variations of quiet ionosphere	3047
radiation from nuclear weapons, shielding, review and bibliography	7577
slow, probability of collision for momentum transfer in nitrogen plasma afterglow	20526
spectrum, special features of superconducting compounds	4902
tables of radial functions and tangents of phase shifts for light nuclei	18804
three-body collisional recombination of cesium seed ions and electrons in high-density plasmas with argon carrier gas	21752
zero-field, work function of metal immersed in gas, application to cesium thermionic diode	14886
Electrophoresis, electrical dewatering of dilute clay slurries	16632
Electrophysiology, see Physiology.	
Electroplaters, employment outlook	7386
Electroplating, tungsten, preparation of thick coatings	13130
Electroplethysmography, optimum conditions for recording, for parts and organs of human body	11424
Electrorefining, see Smelting.	
Electroslag:	
build-up of certain forms of forging dies, USSR study	11143
melting, electrodes, consumable, USSR study	10959
process, determination of bath temperature by calorimetric method, USSR study	2754
remelting—	
effect on technical plasticity of iron-nickel-chromium base alloys, USSR study	1914
for steel production, USSR studies	1166
steel, heat resistant stainless, USSR, study	2517
strip rolling and remelting, USSR study	2653
USSR study	2585
slag composition effect on melting of electrode of large cross section in electroslag process, USSR study	1237
smelting for use in machine building	9013
Electroslag welding, see Welding.	
Electrostatic accelerators, see Van de Graaff generator.	
Electrostatic precipitators:	
characteristics of positive corona at high temperatures and pressures	9514
feasibility of electrical precipitation at high temperatures and pressures	2993
Electrostatic separation, high conductivity minerals	9521

# JANUARY-DECEMBER

Entry	Entry
Electrostatics:	Ellipsometry in measurement of sur-
adsorption of ions, USSR study....	faces and thin films, symposium proceedings.....
helicopter main rotor blades, measurement program to determine static electricity charging currents.....	21782
high-performance electrostatic discharge for helicopters.....	Elliptic functions, see Mathematics.
oscillations, excitation in magnetic field.....	Ellis County, Tex., soil survey report.....
thrusters with analytic space-charge flows, theoretical performance.....	Ellis Island, New York Harbor, disposal.....
9017	Ellison, Ralph, lecture, Jan. 6, 1964.....
Electrothermal engine propellant storage and feed system study.....	Ellyett, C., radar investigation of meteors at high rates of detection.....
13148	5522
Electrothermic equipment, cryogenic feed systems for electrothermal engines.....	Elm, see Dutch elm disease.
13153	Elm-bark beetles, see Beetles.
Electrowinning, see Electrolysis.	Elm spanworms, see Spanworms.
Elektron space system, USSR.....	Elman, Philip, nomination, hearings.....
9084	4576
Elektron studies of earth's radiation belt, USSR.....	Elmore County, Idaho, ground-water reconnaissance of Sallor Creek area.....
10998	15944
Elementary education:	El Paso, Tex.:
aerospace teaching to meet challenges of space age, handbook.....	relocation of Rio Grande, convention with Mexico.....
7569	2137, 7709
enrollment, teachers and school-housing, fall 1963, statistics.....	implement—
15844	hearings.....
grouping children for instruction in elementary schools.....	law.....
6569	10143
inservice mathematics education, promising practices for elementary school teachers.....	reports.....
19630	4521, 4566, 6832, 8342
nongraded schools.....	El Paso County, Colo., Fountain and Jimmy Camp Valleys ground water.....
19635	12516
programmed instruction, USSR experience.....	Elrod, Charles W., design handbook for liquid and gaseous helium handling equipment.....
7147	5870
public school approval and accreditation.....	Elrod, Warrick E., jr., monetary effects of financing agricultural exports.....
14192	568
publications, list.....	El Salvador, see Salvador.
14193	Elisner, Elizabeth K., awards of 1962 National Crushed Stone Association safety contest.....
reading research for middle grades, bibliography.....	1397
599	Elson, Jo A., abstracts of Personnel Research Laboratory, 1963.....
science programs, evaluation.....	7993
selected references, education briefs, etc.....	Elterman, L., altitude variation of Rayleigh, aerosol, and ozone attenuating components in ultraviolet region.....
14197	19149
space-oriented mathematics for early grades.....	Elton, R. C., stark profile measurement of Lyman- $\alpha$ and Lyman- $\beta$ lines of hydrogen.....
19623	5608
Elements, double actuating, used in control system to ensure greater reliability, USSR study.....	Ely quadrangle, Nev., mineralization associated with magnetic anomaly.....
14573	18122
Elements (chemical), see Chemical elements—Fission products.	EM series.....
2660	2208, 4664-69, 6592-94, 12850-851, 14204-206, 15871-872, 19654-657, 21279.
Eleutherocecus, and glaucus, symposia, USSR.....	Emanuel, Carl, hestianic acid, biologically resistant pigment from aerobic waste digesters.....
2660	1743
Elevator constructors, see Mechanics (persons).	Embankments, overflow, Arkansas River, stability of riprap, etc.....
Elevators, see Grain elevators.	14212
Eliaas, Andrew, labor force of Czechoslovakia, scope and concepts.....	Embrittlement, see Fracture of metals.
10070	Embryologists:
Elk River, Idaho, metamorphism of Belt series in area.....	fourth conference, USSR.....
4784	10408
Elkins, Douglas A., estimated cost of exploiting manganese ore from Maggie Canyon deposit, Mohave County, Ariz.....	international conference in Helsinki.....
13115	9081
Ellington, Jesse L., relief.....	Embryos:
4445, 13843, 2020, 6414, 6166	bird, measurement of heartbeat.....
12181	11364
Elliponoulos, Anastasia, relief.....	DNA in duck embryos, USSR translations.....
6414, 6166	2597
Elliponoulos, Teresa, relief.....	whale sharks, morphology.....
2020, 6414, 6166	7597
Elliot, Lois L., apparent change in repetitive noise bursts.....	Emerald Mound, Natchez Trace Parkway, general information.....
5897	13300
Elliot, Rodney P., alloying characteristics of rare earth elements with transition elements.....	Emergencies, see Disasters.
19233	Emergency boards:
Elliot, William P.:	maritime emergency boards, appointment, Department reports on H.R. 1897.....
height variation of vertical heat flux near ground.....	10332
20958	reports—
operational prediction of diffusion downwind from line sources.....	Eastern, Western, and Southern Carriers Conference Committee.....
13627	10478
Ellipsoidal optical reflectors reproduced by electroforming.....	Florida East Coast Railway.....
20544	6583
Ellipsoids, international, natural function tables for computing geographic positions.....	National Railway Labor Conference.....
10117	19644
	Pullman Co.....
	2290
	United Air Lines, Inc.....
	4653

# INDEX 1964

	Entry
Emergency broadcast system, <i>see</i> Warning systems.	
Emergency health preparedness publications catalog.....	18905
Emergency Planning Office: appropriations, 1965, hearings.....	10290
deputy director, nomination of Franklin B. Dryden, hearing.....	17866
press releases.....	3879
stockpiling cordage fibers, questionable need, GAO report.....	21339
Emergency repatriation assistance act of 1961, <i>see</i> Repatriates.	
Emerson, Thomas E., jr., mechanisms of action of insecticide endrin.....	5994
Emery, Philip A., geology and groundwater resources of Richardson County, Nebr.....	21360
Eminent domain, real property acquisition practices and adequacy of compensation, hearings.....	14016, 15602-603
Emission: field, charging of metallic colloids.....	5516
solar radio emission, velocity of corpuscular streams in solar corona based on observations.....	20624
spectrum analysis of atomic materials.....	5952
tester for high-power vacuum tubes.....	20559
<i>see also</i> Electrons—Thermionic emission.	
EMIT (electromagnitnyy izmeritel' techeniy), <i>see</i> Electromagnetic current meter.	
Emission, spectral normal and total normal, of Inconel, Inconel-X, and type 347 stainless steel, effects of preoxidation treatments.....	16684
Employee benefit plans: amend Davis-Bacon act to include fringe benefits in prevailing wages.....	8452
hearing.....	13897
law.....	10537
code of Federal regulations.....	9774
estimated coverage, 1962.....	
Federal Deposit Insurance Corporation, assumption of costs, report.....	356
fringe benefits for Federal employees, supervisory training course.....	20796
retirement credit and fringe benefits for Federal-State service, hearings.....	15601
welfare and pension plans disclosure act, questions and answers.....	11248
Employee pensions, <i>see</i> Pensions.	
Employee suggestions, <i>see</i> Suggestion systems.	
Employee training, orientation in Branch of Education, Indian Affairs Bureau.....	835
Employees: earnings—	
retail general merchandise stores.....	9455
selected metropolitan areas of South, June 1961–June 1962.....	16608
50 selected health and insurance plans, digest, spring 1963.....	9454
health and insurance benefits and pension plans, spring 1963.....	14704
<i>see also</i> Government officials and employees—Railroad employees— <i>also</i> names of departments, etc., where employed.	
Employees' Compensation Appeals Board, decisions, July 1, 1962–June 30, 1963.....	4654

	Entry
Employers: contributions into joint industry promotional funds—	
hearings.....	4494
report.....	12094
expenditures for supplementary compensation practices for—	
production and related workers, manufacturing industries, 1962.....	20443
production workers, meatpacking and processing industries, 1962.....	14706
expenditures for supplementary remuneration practices in finance, insurance, and real estate industries, 1961.....	21670A
guide to on-the-job training under manpower development and training act.....	20977
insurance, pension and vacation payments, building trades in 100 cities, Jan. 2, 1964.....	7421
records kept under fair labor standards act—	
general requirements.....	5750, 16915
miscellaneous exemptions, etc.....	5751
reporting requirements under labor-management reporting and disclosure act.....	16577
rights and limitations during union organizational campaigns (address).....	5561
tax guide.....	6837
Employers' liability and workmen's compensation: agricultural workers and workmen's compensation.....	11253
Canal Zone employees appeal rights—	
law.....	17367
reports.....	15517, 17731
controversial cases, New York State workmen's compensation.....	16909
Federal Deposit Insurance Corporation assumption of costs, hearing.....	400
Federal employees compensation act, amend to permit services of chiropractors, hearing.....	17885
injury compensation guide for USDA supervisors.....	1538
longshoremen's and harbor workers' compensation act, as extended benefits provided under.....	17930
payments and costs, 1962.....	3134
problems, 1963.....	16578
publications, price list.....	13390
State laws—	
comparison of major provisions with recommended standards, history and coverage benefits, summary.....	11264
workmen's compensation enactments in 1963.....	7422
Employment: act of 1946, amend—	
law.....	21153
report.....	19567
adequate data needed for evaluating etc., training under Manpower development and training act of 1962, Labor and Health, Education, and Welfare Depts., GAO report.....	10610
aging, disabled worker, rehabilitation programs.....	3185
allens in scientific or technical capacity—	
law.....	17407
reports.....	17551, 17806
allens temporary admission study.....	2115

# JANUARY-DECEMBER

	Entry
Employment—Continued	
apprentices under fair labor standards act of 1938, code of Federal regulations	1654
atomic energy field, occupational survey 1962	8092
automation relationship, current developments in U.S. (paper)	14713
brighter future through job training	610
city, 1963	8136
coal mines—	
injury experience, 1961	2983
injury experience, 1962	20477
monthly report	3332
comparison of U.S. and U.S.S.R. employment in industry	10069
deaf, driving and employability, symposium	9871
dual compensation-dual employment laws, modernize—	
hearing	6523
law	17307
reports	331, 6279, 6485
statement of purpose, etc.	12152
economic problem of future	1386
elderly, increase opportunities—	
hearings	8435, 10409
recommendations and comment, report	21236
employment and earnings (periodical)	3433
employment situation, monthly release	3437
equal opportunity (remarks)	9702, 15034
farm labor market developments	3459
employment and wage supplement	3460
farmers, self-employed, are you getting your social security credit?	1587, 21875
Federal—	
Federal employment statistics bulletin	3466
jobs overseas	4391
monthly report	3744
thinking about your first job? remember Uncle Sam	10107
working for U.S.A.	11950
Forest Service nonprofessional jobs	9954
full employment (addresses, etc.)	1359, 14666
full employment proposals, report	15817
additional copies	15688
Government, avoiding conflicts of interest, report	854
Government employment series	8135-36
governmental, historical statistics, census of governments, 1962	19287
announcement and order form	19283
handicapped persons, new dimensions in services to applicants (remarks)	18619
high school graduates and dropouts in 1963	14709
hire mentally restored	7369
hire mentally retarded worker	7370
homeworkers in industries under fair labor standards act	11682
household statistics, concepts and methods used	16589
impact of changing defense programs	14710
Indians, adult, amend act—	
law	1959
report	335
job tenure of American workers, Jan. 1963	5447
job vacancy statistics in England and Israel	11288

	Entry
Employment—Continued	
joint, relationship under fair labor standards act	19015
manpower resources of Nation, training and utilization, hearings	543, 2247, 4589
maternal, effects on child rearing, personal and family factors	8144
meeting challenge of changing skills	10479
messengers, code of Federal regulations	16917
metal and nonmetal industries, minerals yearbook chapter	20471
metropolitan Washington, technical and skilled workers, estimates of future demand	611
minerals industries, minerals yearbook chapter	21688
multiple jobholders in May 1963	5449
National Park Service—	
career	5566
seasonal	3065
Naval Weapons Bureau, opportunities	3435
Negro women workers in 1960	11722
Negroes in marketing field, economic trends (remarks)	10128
nuclear scientific era (paper)	13087
opportunities—	
binational centers abroad	20864
federally aided project, restricted to individuals having funds to invest in business, ARA, GAO report	21333
job information	8503
outlook—	
accountants	9382
advertising, marketing research and public relations workers	9383
agricultural occupations	13057
air-conditioning and refrigeration mechanics	9430
aircraft, missile, and spacecraft manufacturing occupations	7392
apparel industry	9438
appliance servicemen	9431
architects	9384
atomic energy field	9439
automobile mechanics, diesel mechanics	7387
baking industry	9440
banking occupations	9441
barbers, beauty operators	9414
biological scientists	7375
bookkeeping workers, office machine operators	9415
bricklayers, stonemasons, etc.	13066
business machine servicemen	9432
carpenters	9419
cashiers	13054
chemical industry	7393
chiropractors	9392
civil aviation	9442
clergymen—	
Protestant	9385
rabbis	13047
Roman Catholic priests	13048
commercial artists	9386
construction electricians, elevator constructors	7383
construction laborers and hod carriers	9420
counselors, school, rehabilitation, vocational	9387
dental hygienists	7376
dental laboratory technicians	9393
dentists	9394
dispensing opticians and optical laboratory mechanics	9425
driving occupations	9426
earth scientists, geologists, geophysicists, meteorologists	9388
oceanographers	9388



# INDEX 1964

Entry	
Employment—Continued	
outlook—Continued	
electric light and power occupations	9443
electronic computer operating personnel, programmers	9415A
electronics manufacturing occupations	9444
electroplaters	7386
engineers	9389
factory occupations not requiring specialized training	9427
FBI agents	9416
floor covering installers	7384
foresters	9390
forge shop occupations	9428
foundry occupations	9445
gasoline service station attendants	9429
geographers	9391
government occupations	13058
home economists, dietitians	9395
hospital administrators	13049
hotel occupations	9446
industrial designers	13053
instrument repairmen	9433
insurance and real estate agents and brokers	7381
insurance occupations	7394
interior designers and decorators	9400
iron and steel industry	9447
landscape architects	9401
lawyers	9402
librarians	7378
machining occupations	7388
maintenance electricians	9434
mathematicians, statisticians, actuaries	9403
medical records librarian	9396
medical technologists	9396
medical X-ray technicians	9396
millwrights, industrial machinery repairmen	9435
motor vehicles manufacturing	7395
newspaper reporters, technical writers	7379
nurses, registered professional and practical	13052
optometrists	7377
osteopathic physicians	13050
painters, paperhangers, glaziers, asbestos and insulating workers	9421
performing arts, musicians, singers, actors, actresses, dancers	738C
personnel workers	9404
petroleum production and refining occupations	9448
pharmacists	14662
photographers	9405
physical scientists, chemists, physicists, astronomers	9406
physical therapists, occupational therapists	13051
physicians	9397
plasterers, lathers, cement masons	9422
plumbers and pipefitters	9423
podiatrists	9398
police, policemen, policewomen, firemen	13055
post office occupations	9449
printing occupations	7389
psychologists	9407
pulp, paper, and paper products industry	9450
purchasing agents, industrial traffic managers	9408
radio and television broadcasting occupations	7396
railroad occupations	9451
restaurant workers	9452
roofers	7385
salesmen, retail stores, wholesale trade, manufacturing	9417

Entry	
Employment—Continued	
outlook—Continued	
sheet metal workers	7385
shipping and receiving clerks	7382
social scientists, anthropologists, economists, historians, political scientists, sociologists	9409
social workers	9410
stationary engineers	7390
stenographers, secretaries, typists	9418
structural, ornamental, and reinforcing-iron workers, operating engineers	9424
teachers	9411
technicians, engineering and science technicians, draftsmen and surveyors	9412
telephone occupations	9453
television and radio servicemen	9436
urban planners	9413
veterinarians	9399
watch repairmen, jewelers, etc.	9437
welders, oxygen and arc cutters, boilermaking occupations	7391
public—	
compendium	11889
announcement and order form	11884
State distribution, 1962	190
State distribution, 1963	8135
public works acceleration act, 1963—	
hearings	412
report	2092
public works coordination and acceleration act, areas eligible for immediate public works assistance, list	413
reading machines for data processing, effects	2943
school age youth	9470, 18642
scientific and technical personnel in—	
industry, 1962	16613
State government agencies, 1962	14705
security research methods	2292
selected readings in employment and manpower	10430, 15813
vols. 1-2, print additional copies, reports	15683, 17513
self-employed, social security information	7736, 21872
self-employed workers under social security	16863
senior citizens, statistics	10072
smaller communities program in operation	4660
State and local government employment and payrolls	4050
statistics, States and areas, 1939-63	18629
status and geographic mobility	13074, 21677
student learners, code of Federal regulations	11680
summer—	
students in social work, guide	18533
temporary, extend apportionment requirement, hearing	4591
taxes, poverty, jobs, and profits (speech)	11829
total private economy and nonfarm sector, comparisons of payments, prices, etc., 1947-62	16615
Veterans Administration, benefits for employees	21916
women, Federal Employment Policies and Practices Committee report	3090
workers covered by State unemployment insurance laws	3434
youth, problems and programs (address)	1360

# JANUARY-DECEMBER

	Entry
Employment—Continued	
youth, profile of youthpower in Cincinnati	10480
see also Child labor—Discrimination in employment—Farm labor—Government officials and employees—Handicapped—Labor—Manpower—Occupations—Veterans—Women.	
Employment agencies, see Employment offices.	
Employment certificates: help you, help youth	18612
where to obtain, requirements, etc	16584
Employment management: contractor-furnished personnel, use instead of Government personnel, excessive costs incurred by Pacific region, Ground Electronics Engineering Installation Agency, Air Force Logistics Command, Air Force Dept., GAO report	8718
Federal Aviation Agency, redeployment of personnel, 1963, report	8337
Employment offices: private agencies, regulating—State law, suggested language	13038
State laws summary	11258
Employment security activities, see Unemployment insurance.	
Employment Security Bureau: appropriations, 1964, supplemental—law report	8234
RES series	2292, 4656, 8498, 21270
Employment security offices, see Unemployment insurance.	
Employment security review	3436
Employment Service: employment service review (periodical)	8499
supplement	8500
statistics (periodical)	8500
Employment taxes: IRS looseleaf regulations system	8696, 4836, 8805, 12545, 15978
rates by industry, 1962	8498
temporary unemployment compensation act amounts, restoration, revise law—law report	253
Emaweller, S. L., roses for the home.	9943
Enamel, see Teeth.	
Encapsulation process sterilizes and preserves surgical instruments.	16671
Encephalitis, Japanese B virus, pathogenicity of different strains isolated from human, swine and mosquitoes	8939
Encephalography, axial transverse, new concept in pneumoencephalographic interpretation	5533
Encoders, PFM telemetry, design	13211
Encyclopedias, medical, USSR, translations	2806, 2814, 18419, 20136, 21599
End Results of Cancer Therapy, International Symposium, see International Symposium of End Results of Cancer Therapy.	
Endervick, T. P., enhancement of fire control technician proficiency by use of training devices	18852
Endocarditis, see Heart disease.	

	Entry
Endocrinology: endocrine and metabolic effects of short-duration hyperoxia	8001
research activities, Stefan Milcu, Rumania	6997
Endogeny, pathogenic bacteria in endogenous medium, detection, USSR study	20219
Endotoxins: poisoning, implication of tryptophan pyrrolase	4248
treatment, effect on Cocksackie B virus infection	7983
Endrin: insecticide, acute and chronic effects on renal function and renal hemodynamics	13728
mechanisms of action	5994
Enemy property: administration of trading with the enemy act, report	10398
return of Austrian property, rights and interests, agreement	15113
report	10365
Energy, see Atomic energy—Electricity—Force and energy—Radiant energy.	
Energy conversion: direct, chemical energy into electrical energy, problem	5531
direct, solar, thermal energy storage, heat-transfer analysis	9569
plasma expanding in vacuum in presence of magnetic field	16733
sea water battery plus tunnel diode converter as power source	5606
Energy dissipation, systems, use of cellular aluminum	18719
Energy metabolism, see Metabolism.	
Energy spectrum, see Spectra.	
Enforcement of law, see Law enforcement.	
Engineered performance standards: bibliography	11658
electrical electronic handbook	5773
engineer's manual	5774
heating, cooling and ventilating—formulas	7870
handbook	7871
paint formulas	5775
paint handbook	5776
railroad track maintenance—formulas	1670
handbook	1671
Engineering: address	13819
aides employed by soil and water conservation districts in Oklahoma, validate social security coverage, amend act—law reports	21142
civil service, cooperative work-study positions, opportunities for college students	8316, 17833
computer mathematics and engineering, USSR study	17132
contributions of Wendel Bollman	20247
courses, written materials, films, mathematics, science, engineering, studies supported by National Science Foundation	21798
data, northern Alaska exploration (series)	20668
defense communications system, installation standards manual	19782
design handbook series	6536
8024, 17035, 19202	94-95, 20989
development program for civil defense, highlights	15345
drawings, types, definitions and requirements, military standard	15832

# INDEX 1964

	Entry
Engineering—Continued	
East European journals, abstracts	984, 1174, 1216, 1308, 1345, 2700, 2781, 2840
East European scientific abstracts	4966, 5070, 5196, 5232, 6902, 6954, 7338, 8982, 9100, 9132, 9224, 9368, 10809, 10872, 11000, 11064, 12644, 12721, 12739, 12867, 12889, 12908, 12942, 12955, 13010, 14426, 14524, 18215, 18424, 18527, 16043, 16085, 16218, 16461, 16541, 19982, 20142, 21424
electronic data processing, suggested techniques for determining courses of study	8481
engineering monographs	9743-44, 11593
enrollments and degrees, fall 1963, advance report	8478
environmental, research grants, 1964	21856
foreign-language and English dictionaries, selected bibliography 1952-63	16737
highway, muskeg and its associated problems, review	8514
journal of research, National Bureau of Standards	3630, 13271
Maritime Administration future potential of value engineering program	2977
method for calculating protection afforded by structures against fallout radiation	14938
mine production schedules, determining by linear programming	13117
new materials, USSR study	2552
physics, journal, translations	5320, 5327, 8979
psychology, scientific organization, USSR study	18238
public health engineering abstracts	3044
public works maintenance, engineered performance standards, manual	5774
publications, price list	7683
R-N process application to Lake Superior region iron ores	8018
Reclamation Bureau—laboratories	9742
research, methods and materials	9749
reliability engineering handbook	16801
reliability, specifications, etc., Naval Weapons Bureau film brochure	18867
seismology, problems, USSR study	9325
shells, general theory, and its application in engineering	11423
Soviet and Chinese articles, English abstracts	3442
survey, aircraft structural failures caused by corrosion, fatigue, and abrasion	19001
technology, 2-year college programs, ECDP accredited, 1963	4619
trainee, examination announcement	19338
urban development, evaluation of soils and use of soil surveys	2319
USSR, Lenin prizes	2743, 16030
USSR, scientific abstracts	1016, 2733, 5169, 9035, 11240, 16198, 18193, 18498, 20092, 20353, 21408
with nuclear explosives, 3d Plowshare symposium	17063

	Entry
Engineering—Continued	
see also Aeronautical engineering—Civil engineering—Earthwork and structures—Electric engineering—Human engineering—Hydraulic engineering—Mechanical engineering—Mineral engineering—Nuclear engineering—Radio engineering—Sanitary engineering	
Engineering aids, 1 & C, Navy training course	14990
Engineering and design manuals	12350-351, 15872, 19654-657
Engineering equipment:	
East European scientific abstracts	21424
preventive maintenance indicators for commanders, Marine Corps manual	5460
Soviet and Chinese articles, English abstracts	3442
unnecessary procurement by White Sands Missile Range, N. Mex., Army Dept., GAO report	6790
USSR scientific abstracts	20353, 21498
Engineering journal (USSR periodical):	
translations	2935, 7019, 9004, 16300, 18322, 19946
Engineering materials list, index	8072
Engineering psychology, see Human engineering—Psychology	
Engineers:	
career opportunities—building tomorrow's weather systems	15150
careers in Federal Government	10110
Forest Service, your gateway to future career	37
Public Roads Bureau	20775
education and engineer (remarks)	1784
employment in industrial research, etc., 1962, final report	13306
employment outlook	9389
examination announcements	10100, 13806, 13810
Federal, personnel system, Federal merit system of interest to	6101
geological, training at Moscow Geological Prospecting Institute	21594
labor market conditions, semiannual study	4657, 19647
manpower studies, utilization, salaries	6123
requirements and supply in 1960's	7624
soil Conservation Service	5840
supply and demand 1960-70	2971
see also Civil engineers—Electric engineers—Engineering aids—Highway bridge engineers—Highway engineers—Operating engineers	
Engineers Corps, Army:	
appropriations, 1965, amendment	12030
budget, 1964, amendment	422
budget, 1965, amendment	15613
circular EC series	2295-96
finance and fiscal accounting and reporting, civil works activities, regulations	17955
labor and material requirements for civil works construction	13069
laboratory investigational and research facilities	17952
manuals	616-622, 2298, 4664-69, 6592-94, 12350-351, 14204-206, 15871-872, 19654-657, 21279
pamphlet EP series	17952
regulations, ER series	17955

# JANUARY-DECEMBER

	Entry		Entry
Engineers Corps, Army—Continued		English language—Continued	
report, 1963, civil works activities—		oral, conversation classes and discussion groups, planning and conducting—	5737
departmental edition—	8506, 10481	Project English report—	2286
document edition—	8253, 10177	teachers, advanced study, national defense institutes, manual—	21267
Engineers Corps Board of Contract Appeals, digest of decision—	4063	teaching forum—	
Engineers Council for Professional Development, accredited programs, 1963, engineering technology—	4619	articles of interest to teachers of English foreign language—	20865
Engineer's digest (periodical)—	3438	facts and ideas for teacher of English as foreign language—	5733-34, 13505, 19010
Engineman, 3 & 2, Navy training course—	13316	teaching study unit, Ralph Bunche, world servant—	5735
Engines:		workbook, USAFI manual—	555
accessories, Federal item identification guides for supply cataloging—	12289	English literature, classification, Library of Congress—	18630
supplements—	3470	Engraving and Printing Bureau, financial statements, 1961-63, GAO report—	8713
engines and components, Federal item identification guides for supply cataloging—	12289	Eniwetok Atoll, planktonic foraminifera, fossil corals, bryozoa, and brachiopods—	15945
supplements—	3470	Enlisted men, <i>see</i> Army.	
fluid engine power systems, design study—	5978	Enlisted personnel, <i>see</i> Armed Forces—A r m y—N a v y—National Guard.	
Engines (aircraft):		Enlistment, <i>see</i> Recruiting and enlistment.	
airworthiness, civil air regulations amendment—	12360	Enochson, Loren D., frequency response functions and coherence functions for multiple input linear systems—	9534
airworthiness standards—	19671	Enrollment, <i>see</i> Colleges and universities—High schools—Schools.	
current industrial reports—	3390, 8114	Enrollment in selected trade and industrial occupations, 1963—	10462
jet, overprocurement of selected accessories by military services, Defense Dept., GAO report—	2402	Enroute IFR peak day charts—	1751
KC-135A heavyweight 3 engine performance test—	4232	ENTAC (ENgin-Teleguide Anti-Char) <i>see</i> Missiles.	
miniature valveless pulsejets—	16895	Entamoeba histolytica, life cycle, self-instructional lesson for diagnosis of amebiasis—	20740
overhaul and modification, unnecessary costs, from awarding contract without competition, Army Dept., GAO report—	6786	Enteropathogenic bacteria, <i>see</i> Bacteria and bacteriology.	
reciprocating, failure of Army to separate accessories from spare parts, GAO report—	6773	Enterprise (U.S.S.):	
space reciprocating, failure of Air Force to separate accessories from, GAO report—	4767	material price increases, unwarranted allowances to Newport News Shipbuilding and Dry Dock Company, GAO report—	21344
specifications and type certificate data sheets—	3241	Enterprise Rancheria no. 2:	
surface blast effects, Waterways Experiment Station research capabilities—	639	sell and distribute proceeds of sale—	
test stands modification, overestimated costs under fixed-price contracts with Air Force Department, GAO report—	4768	law—	17312
working parts of aircraft, exportation—		reports—	15428, 17710
law—	13884	Enterprise statistics, 1958—	184, 19306
reports—	8305, 12230	announcement and order form—	153
<i>see also</i> Rockets.		Entertainment, <i>see</i> Amusements.	
Engle, Clair, Lake, <i>see</i> Clair Engle Lake.		Enthalpy:	
Engler, Kyle, artificial recharge in Grand Prairie region, Ark., environment and history—	816	air flows from electric-arc heaters—	9574
English Channel, lights and fog signals, list—	11478, 14992, 21815	total, of 1-dimensional nozzle flow with various gases—	7549
English language:		Entomological Society, Academy of Sciences, USSR, account of activity, 1963—	19960
and other Western languages, periodicals on USSR and Eastern Europe—	20454	Entomologists, public health scientist, examination announcement—	209
Ayo visits USA, story for students, USA—	1645	Entomology:	
communication skill—		radioisotopes uses, bibliography—	15283
USAFI exercise book—	10443	USSR research—	10818
USAFI teacher's guide and key—	8462	Entropy:	
USAFI textbook—	557	akermanite, cordierite, gehlenite, and merwinite—	5489
improving skills of culturally different youth—	2274	andalusite, kyanite, and sillimanite—	7448
labor terms—	8835	lead molybdate and lead tungstate—	7437
national defense language institute program, English as second language—	10468	muscovite—	7449
		sulfides of arsenic, germanium, and nickel—	18694
		Entry into atmosphere, <i>see</i> Atmospheric entry.	



# INDEX 1964

Enumerators:	Entry	Entry	Entry
census, reimbursement of telephone tolls and charges, authorize—	10335	Ephemerides:	
hearing	17394	American ephemeris and nautical almanac, 1966	18835
law	17394	ephemeris of sun, Polaris, etc., 1965	16616
reports	10261, 17791	lunar transfer orbit deviation, technique	21747
Environment:		Epicenter, see Earthquakes.	
controlled, clean room and work station requirements, Federal standards	4723	Epicormic branching in north Louisiana Delta	18077
effects on military operations, Waterways Experiment Station capabilities for evaluating	628	Epidemics:	
environmental research papers	11799, 13628-630, 16993-998, 19140-155, 20958-966.	reports from world press	2501
health, coordinating community study	18896	JPRS publication notice	1355
health programs of Public Health Service, career information	5652	Epidemiologists:	
health sciences, research and training grants, announcement	1554, 21843	all-Union congress, USSR	19061
health series—		standardization of work, USSR	4048
air pollution	15047	Epidemiology:	
radiological health	9718, 16833, 21847	and statistics of tuberculosis, USSR study	16551
homogeneous, orientation accuracy, effects of stimulus and field size	20701	control stations, work of radiology groups, USSR	9089
radiation measurements in southeastern, central, and western United States, 1962-63	21012	infectious disease studies, USSR	2627
radiation surveillance	20748	New Jersey radium cases, epidemiological follow-up—	
radioactive contamination	10023	current data	11862
reentry, electric-arc simulators, operating capabilities	18723	progress report	11863
sciences, organization in Federal Government (address)	18531	reports from world press	5172, 7245, 9364, 12895, 16386, 20091
space—		Rumania, Dr. I. Cantacuzino Institute, activities	16016
biological aspects, bibliography	1799	USSR studies	14638
lubrication requirements	4253	Epilepsia, esperanza en la investigacion	21850
simulator, construction problems	7495	Epilepsy:	
surveillance laboratory for radionuclides analyses	21847	bone through research	16838
vibratory, localized, of rocket vehicles, statistical techniques for describing	14847	Spanish edition	21850
see also Life support systems.		infantile, explained to parents	21542
Environmental and chemical hazards series	5419, 18614	Epistemology, pragmatic analysis as theory of epistemological discipline, East German study	10836
Environmental Engineering and Food Protection Division, research grants, 1964	21856	Epithelial cells:	
Enz, Richard W.:		changes under influence of radiation, USSR study	2924
snow survey measurements for Arizona, 1938-64	18955	mouse cornea, effect of suprarenal hormones on radiation sensitivity of chromosomal apparatus, USSR study	2890
water supply outlook and Federal-State-private cooperative snow surveys for Arizona	4137	Epithelium, large intestines, histogenesis and age changes	18353
Enzymes:		Epoxy resin, see Resins.	
activity analysis as method for evaluation of action of oral preparations	72	Eppley, Richard W., evaluation of marine algal flagellates for mass culture	5902
animal, USSR study	19092	Epstein, Lenore A., retirement income and measures of need	7740
deoxygenating, new concept in corrosion prevention	1533	Epstein, Leo:	
enzymatic classification of poisons, USSR study	21458	occupational wage surveys—	
proteolytic, application in treatment of deep burns, USSR study	20004	Boston, Mass.	7405
unique, USSR study	12732	Burlington, Vt.	13064
utilization for detection of biologically harmful agents, USSR study	18289	Lawrence-Haverhill, Mass.-N.H.	18634
Eocene period:		Manchester, N.H.	1378, 20442
Ishigaki-shima, Ryukyu-rette—		New Haven, Conn.	11278
algae	21853	Portland, Maine	7411
megafossils	18128	Providence-Pawtucket, R.I.-Mass.	16508
		Waterbury, Conn.	13065
		Worcester, Mass.	18637
		Equal employment opportunity, see Discrimination in employment.	
		Equal Employment Opportunity Administration, establish, report	4565
		Equal Employment Opportunity Board, establish, report	4565
		Equal Employment Opportunity Commission:	
		establish—	
		hearings	4502, 4507, 6514, 14017
		law	13900
		reports	351, 4470, 18959
		Equal Employment Opportunity, President's Committee on, see President's Committee on Equal Employment Opportunity.	

	Entry		Entry
Equal Employment Opportunity Regional Community Leaders' Conference:		Equations of motion—Continued	
Chicago regional conference, May 22, 1964	16818	liquid layer of uniform thickness spread over rigid circular cylinder subjected to lateral accelerations, stability criterion	18776
Eastern regional conference, June 10, 1964	20738	Scout vehicle during 4th-stage reentry flight analysis	13236
Equal Opportunity Day, observance, Washington, D.C., 1965	1358	simultaneous computation of secular and resonance effects in motion of celestial bodies	13223
Equal opportunity in Federal employment	17138	Equatorial Customs Union, foreign trade regulations	21073
Equal opportunity in housing	21367	Equilibrium:	
Equal pay facts	13548	liquid free surface under low gravity and centrifugal forces	20598
Equal rights, see Women.		thermodynamic	
Equations:		hypersonic conical flow parameters for air, approximate calculation	7504
axially symmetric vibrations of liquid-filled cylindrical shell	14924	local departures in AO star atmosphere	7519
balance, use of statistical methods in studying finite-difference structure, USSR study	7043	Equipment for neurophysiological investigations, USSR	19545
complex Fresnel integral tables	14797	Equipment specialist, examination announcement, amdt.	210
differential—		Equipment, see Dental instruments and apparatus—Engineering equipment—Hospital apparatus and supplies—Medical instruments and apparatus—Military supplies—Optical instruments and apparatus—Production equipment—Veterinary instruments and apparatus	
numerical integration by power series expansions	21778	ER series	185, 4326-34, 6002-25, 8099-8101, 10067, 15299.
rocket booster control of plants containing derivatives of control variable	13145	ER 60 series	15822-328
solution of boundary value problems on B. G. Galerkin's method	9626	Erickson, Porter W. glass fiber surface treatments, theories and Navy research	13349
stability in the large of nonlinear system	20592	Erickson, R. L. geochemical exploration near Getchell mine, Humboldt County, Nev.	15943
flight-time shift, analytic solutions	13637	Erie-Lackawanna RR., accident	876
flow through nozzle calculations	13250	Erie, Lake:	
governing, for radiation-resisted shock waves, direct solution	5519	commerce, Council of Lake Erie Ports (remarks)	6638
guidance, for space maneuvers	18736	fisheries explorations, May-Nov. 1964	14273
hydrodynamic, forecasting atmospheric pressure fields, USSR study	4960	Erosion:	
integral relations application to supersonic nonequilibrium flow past wedges and cones	18794	electroerosion machining of metals	8007
linear—		erosion and sedimentation in semi-arid environment (series)	10637
airfoil characteristics in non-equilibrium ambient stream	13258	see also Soil erosion.	
theorems of theory of $\psi$ -stability in cooperative games, USSR study	7152	Error-correcting codes:	
nonlinear systems, numerical method for transient response	5589	Bose-Chaudhuri, application	18858
Orr-Sommerfeld equation for case of plane Poiseuille flow, numerical method	16717	noise immunity of communications with error correcting feedback, USSR systems	16531
radionuclide analysis of gamma-ray spectra by stepwise multiple regression	9713	PCM error correction and synchronization code	14860
reaction rate, in atmosphere below 150 kilometers, solution	55	Errors:	
transport, partially ionized gas in electric field	11406	constant percentage, analog variable coding	9605
transport properties of partially ionized gas in presence of electric and magnetic fields	14893	first-order error statistics for 3- and 4-station hyperbolic fixes on spherical earth	19166
transverse vibrations of liquid-filled shells	14923	fold over, reduction in flux-gate magnetometers	21758
Equations of motion:		manually recording transit times of stars and distant planets	18761
air humidity influence on development of convective motions in cloudless atmosphere, USSR study	975	nonlinear-averaging, in radiation pyrometry	16711
aircraft vertical/short takeoff and landing study	15003, 21826-827	ERS, see Economic Research Service.	
drift of 24-hour equatorial satellites in earth gravity field through 4th order	7515	ERS-foreign series	2264, 6556-57, 8471-76, 10456, 12314-316, 14172, 15837, 17907-910, 21261.
flight-path angle of reentry vehicle in upper atmosphere, approximate solutions	16696	ERS series	2260-63, 6555, 8469-70, 12310-313, 14168-171, 17903-906, 19621, 21260.
helicopter analysis report, simulation	13322	Erskine, Julian A., relief	2005, 6437.
		Erskine, Mrs. Julian A., relief	17231

# INDEX 1964

	Entry		Entry
Erythrininae, <i>see</i> Characidae.		Etivluk River, geology of region-----	10636
Escalator clause, <i>see</i> Wages.		Etkin, Seymour :	
Escape (law) :		deep-sea domestic waterborne traf-	
juvenile delinquents, amend U.S.		fic-----	4874
code-----	1979	1957-61 -----	14400
law -----	507, 2045	1958-62 -----	
reports -----		Etzler, Dorsey H., testimony, hear-	
Escapes, <i>see</i> Refugees.		ings -----	6526
Esch, Harriette H. :		Eucalyptus, robusta eucalyptus wood,	
Federal Trade Commission, deci-		its properties and uses-----	18082
sions, findings, etc.-----	6696, 21316	Eucyclops serrulatus, <i>see</i> Crusta-	
Federal Trade Commission statutes		ceans.	
and court decisions, 1963 sup-		Eufaula National Wildlife Refuge, des-	
plement -----	15909	ignate, report -----	17606
Escherichia coli, membrane system in		Eufola, N.C., railroad accident-----	12570
cells, USSR study -----	20255	Eugene, Oreg., principal electric fa-	
Eschmeyer, Paul H., lake trout (Sal-		cilities, map -----	676
velinus namaycush) -----	15920	Eugenie II (steamship) :	
Eschner, A. E., snow deposition and		documentation, with coastwise priv-	
melt under different vegetative		ileges, report -----	2204
covers in central New York -----	8649	Eulogies, <i>see</i> Memorial services.	
Escobar, Denise J., relief -----	1880, 2153	EURATOM, <i>see</i> European Atomic En-	
ESD, <i>see</i> Electronic Systems Division.		ergy Community.	
Espenshade, Gilbert H., geology of		Eureka, Calif., consumer expenditures	
some copper deposits in North		and income, 1961 -----	11271
Carolina, Virginia, and Ala-		Eureka quadrangle, Utah, geology-----	8755
bama -----	800	Eureka to Point Conception, Calif.,	
Espinosa Canyon quadrangle, Calif.,		coastal warning facilities chart,	
geology -----	12506	1964 -----	11686
Espionage, laws, administration, in-		Europe :	
vestigation, expenses, reports-----	4558, 17813	and Atlantic Alliance (address)---	15259
Essentials of social security in United		capital markets, description and	
States -----	9773	analysis -----	6191
Essex, Burton L., forest area in Illi-		Eastern-----	
nois, by counties, 1962 -----	18051	agricultural situation, 1964-----	8474
Estate tax, <i>see</i> Inheritance and trans-		agriculture, forestry, and food in-	
fer tax.		dustries, translations-----	896,
Estates, <i>see</i> Decedents' estates.		944, 1010, 1045, 1066, 1137,	
Esters, high-toxic organic phosphoric-		1210, 2536, 2551, 2563, 2693,	
acid, analysis, Hungarian		2879, 4919, 4944, 5124, 5185,	
study -----	5257	5213, 5227, 5318, 5395, 7084,	
Estes, Billie S. :		7099, 7115, 7136, 7214, 7240,	
grain storage operations, Agricul-		7304, 8873, 8960, 9057, 9086,	
ture Dept. handling-----		9241, 9313, 9358, 10721, 10773,	
hearings -----	14001	10830, 10857, 10873, 10897,	
subcommittee report -----	19509	10923, 11048, 11059, 11074,	
pooled cotton allotments, Agricul-		11146, 11157, 11217, 12599,	
ture Dept. handling-----		12620, 12673, 12693, 12714,	
hearings -----	532	12749, 12766, 12793, 12814,	
report -----	19584	12831, 12871, 12894, 12915,	
Estonian Soviet Socialist Republic :		12947, 13006, 14439, 14459,	
industry, tasks and plans -----	9349	14501, 14559, 14589, 14611,	
Rakhva Vytyt kolkhoz, increased		14625, 16040, 16058, 16098,	
production through use of fer-		16227, 16321, 16350, 16378,	
tilizers -----	8885	16403, 16528, 16550, 18195,	
Estrada, Emilio, Jambeli culture of		18247, 18272, 18299, 18328,	
south coastal Ecuador -----	18820	18352, 18427, 18463, 18493,	
Estuaries, tidal, determining pollutant		18510, 18537, 19879, 19980,	
distribution -----	19791	20074, 20178, 20192, 20328,	
Etching, dislocation etch pits on so-		20349, 20361, 21386, 21417,	
dium chloride, evaluation of		21512, 21531, 21563, 21572,	
etchants and techniques used		21581, 21616, 21627.	
to produce -----	13242	demographic changes-----	2115
Ethics :		economic organization and man-	
employee conduct -----	15081	agement, translations-----	920,
interim code for Members of Con-		959, 995, 1107, 1136, 1199, 1275,	
gress, etc., establish, hearings,		1348, 2531, 2561, 2652, 2676,	
morals and society, Italian lectures,		2782, 2821, 2898, 2909, 4928,	
translation -----	21476	4995, 5083, 5181, 5215, 5379,	
Polish People's Army, code for of-		6920, 6941, 6989, 7017, 7049,	
ficer -----	16544	7067, 7102, 7144, 7213, 7242,	
Ethics, Joint Committee on, establish,		7269, 7277, 7333, 8899, 9065,	
hearings -----	14156	9081, 9097, 9160, 9216, 9244,	
Ethiopia, Army area handbook-----	19211	9258, 9318, 10737, 10788, 10795,	
Ethnic minorities of southern China,		10811, 10907, 10931, 10980,	
list of references -----	9779	11014, 11034, 11081, 11102,	
Ethnology :		11125, 11186, 11195, 11220,	
ethnographical information on Kir-		12612, 12635, 12649, 12681,	
giz population in Sinkiang-		12702, 12711, 12734, 12742,	
Uigur Autonomous Oblast of		12764, 12780, 12828, 12844,	
Chinese People's Republic-----	11192	12858, 12916, 12944, 14408,	
Huron Indians, 1815-49-----		14446, 14466, 14484, 14505,	
departmental edition-----	11814	14560, 14588, 14602, 14610,	
document edition-----	12019	16008, 16094, 16124, 16175,	
		16190, 16256, 16298, 16333,	

Europe—Continued	Entry
Eastern—Continued	
economic organization and management, translations—Con.	
16417, 16425, 16507, 16547,	
18229, 18254, 18284, 18351,	
18415, 18445, 18459, 18488,	
18507, 18559, 18597, 18672,	
19881, 19968, 19987, 20033,	
20086, 20099, 20198, 20204,	
20251, 20278, 20285, 20311,	
20347, 20380, 20404, 21381,	
21423, 21474, 21511, 21530,	
21544, 21557, 21570, 21626,	
21649.	
export sales of U.S. agricultural commodities, opinion of Attorney General.....	5415
foreign relations of U.S., 1943—departmental edition.....	1596
document edition.....	275
foreign trade, translations.....	960
1104, 1272, 2569, 2654, 2678,	
2718, 2903, 4925, 4972, 5186,	
5258, 5362, 6935, 7027, 7228,	
7233, 7292, 9067, 9118, 9305,	
9365, 11070, 11092, 11144, 11178,	
11241, 12626, 12672, 12694,	
12789, 12823, 12920, 14415,	
14540, 16000, 16097, 16123,	
16228, 16317, 16358, 16390,	
16424, 18246, 18413, 18501,	
18587, 19877, 19924, 20207,	
20253, 20276, 20348, 20360,	
21514, 21528.	
gatherings on physiology and genetics.....	18237
heavy industry, translations.....	917
1106, 1315, 2532, 2725, 2899,	
5187, 5219, 5316, 6961, 7007,	
7203, 7331, 8963, 9262, 9353,	
10823, 11071, 11121, 12631,	
12698, 12829, 12843, 12941,	
14485, 14502, 16130, 16261,	
16363, 16377, 16460, 16538,	
18255, 18395, 18558, 19841,	
20045, 20323, 20350, 20381,	
21457, 21562, 21574.	
legal journals, abstracts.....	907
919, 941, 953, 1026, 1119, 1193,	
2512, 2685, 2750, 2788, 2831,	
4893, 5037, 5063, 5261, 5404,	
6979, 7046, 7068, 7094, 7127,	
7181, 7319, 9025, 9151, 9173,	
9273, 10831, 10843, 10947, 10974,	
11035, 11145, 11159, 11174,	
12663, 12914, 12937, 14646,	
16074, 16091, 16270, 16450,	
16535, 18228, 18497, 19833,	
19911, 19940, 19970, 20116,	
20134, 20145, 20150, 20164,	
20257, 21535.	
materials industries, translations.....	908
1023, 1333, 2546, 2784, 2907,	
4931, 5059, 5218, 5278, 5292,	
5411, 6982, 7259, 7326, 8908,	
9048, 9119, 9145, 9215, 9243,	
9277, 9288, 10824, 10936, 11052,	
11116, 11180, 11223, 12581,	
12670, 12736, 12794, 12838,	
13023, 14497, 14544, 14603,	
16126, 16241, 16416, 16481,	
18242, 18311, 18346, 18375,	
18458, 18535, 18586, 19859,	
19939, 19997, 19999, 20181,	
20209, 20237, 20289, 20386,	
21454, 21487, 21560, 21638	
military information, translations.....	1257
5026, 5039, 6957, 7287, 10852,	
10886, 11190, 11233, 12933,	
14508, 16128, 16544, 18216,	
18484, 18560, 20165, 21521	
periodicals in western languages.....	20454

Europe—Continued	Entry
Eastern—Continued	
political translations.....	918
1351, 2702, 2905, 2932, 5311,	
5365, 6993, 7103, 7211, 7238,	
7272, 8966, 9136, 9247, 10821,	
10858, 10943, 10981, 11037,	
11049, 11155, 11187, 11209,	
12604, 12633, 12656, 12806,	
12821, 12921, 14414, 14506,	
14546, 14586, 16009, 16127,	
16242, 16351, 16404, 16537,	
18207, 18414, 18449, 18536,	
18595, 19863, 19930, 20030,	
20191, 20197, 20274, 20316,	
21513, 21523, 21575, 21629,	
21650.	
recent trends in literature, arts, human rights (law and religion), and younger generation, hearings.....	8381
research studies completed, list.....	7750
research studies in progress, list.....	9786
scientific abstracts.....	4963-67,
4975-76, 5019, 5035, 5070, 5104-5, 5110, 5149, 5162, 5184,	
5196, 5201, 5207, 5224, 5226,	
5231-32, 5249, 5254, 5274-75,	
5293, 5298, 5317, 5326, 5338,	
5348, 5353, 5371-72, 5397-98,	
5407, 6880, 6882, 6888, 6899,	
6902, 6925, 6947-49, 6954, 6976,	
6978, 6985, 7008, 7012, 7014,	
7025-26, 7042, 7111-13, 7126-21,	
7131, 7195-98, 7205, 7207, 7254,	
7262, 7337-39, 8860, 8890, 8892-93, 8895, 8921, 8950, 8971, 8982-83, 8990, 9015, 9026, 9052, 9073,	
9077-79, 9100-1, 9131-33, 9156,	
9161-62, 9168, 9170-71, 9206,	
9224-25, 9237, 9287, 9306-9,	
9327, 9351, 9367-70, 10729,	
10754, 10779, 10809, 10814-815,	
10864, 10871-872, 10874, 10959,	
11000-1, 11041, 11050, 11062-65, 11089-90, 11184-185, 11196,	
12587-89, 12598, 12613, 12636,	
12643-645, 12654, 12679-680,	
12719, 12721, 12739-740, 12782,	
12837, 12845, 12856-857, 12867,	
12874, 12888-889, 12892, 12908,	
12910, 12942, 12953, 12957,	
12998, 13008-10, 13020, 14421-423, 14426, 14431, 14434-435,	
14469-470, 14524, 14564, 14596,	
14600, 16003-4, 16010, 16014,	
16043, 16045, 16081-82, 16085,	
16100, 16108, 16120, 16122,	
16149, 16218-221, 16235, 16268,	
16274-275, 16286, 16318, 16361,	
16368, 16376, 16444, 16446,	
16461, 16486, 16526, 16540 541,	
16543, 18213-215, 18223, 18250,	
18273, 18278, 18291, 18312,	
18337, 18369, 18374, 18380,	
18387, 18402, 18423-426, 18428-429, 18433-434, 18455, 18466,	
18476, 18490, 18492, 18526-527,	
18554, 18557, 18588, 19858,	
19922, 19927, 19981-983, 20008,	
20064-65, 20125-127, 20142,	
20156, 20335, 21392-393, 21395,	
396, 21416, 21424, 21431, 21434.	
scientific and technical journals, abstracts.....	904
948, 967-968, 977, 984, 1034,	
1044, 1063, 1084, 1087, 1099,	
1125, 1129-20, 1173-75, 1192,	
1216, 1218, 1261, 1291, 1308-9,	
1344-47, 1353, 2482-83, 2496,	
2523, 2631-33, 2666, 2687, 2690,	
91, 2700, 2726, 2741-42, 2762-64, 2780-81, 2789, 2803-5, 2840,	
2849, 2853, 2855.	



# INDEX 1964

	Entry		Entry
Europe—Continued		Europe—Continued	
Eastern—Continued		Western—Continued	
publication notice.....	19831	social science research studies in	
service industries, translations.....	951	progress, list.....	20814
1047, 1065, 1212, 1262, 2479,		strategic importance, report.....	19453
2568, 2681, 2727, 2908, 4920,		trade in manufactured products,	
5008, 5064, 5148, 5190, 5230,		1961-62.....	14302-394
5290, 5319, 5332, 5375, 6917,		women's employment.....	7863
7037, 7241, 7348, 8897, 8918,		European Atomic Energy Commu-	
8972, 9070, 9098, 9139, 9212,		nity:	
9280, 9366, 10767, 10789, 10794,		atomic energy, cooperation for civil	
10813, 10878, 10984, 11076,		uses, agreement.....	1615
11085, 11103, 11126, 11154,		Euratom cooperation act of 1958,	
11224, 12593, 12616, 12634,		amendments—	
12669, 12713, 12741, 12763,		law.....	17253
12788, 12810, 12835, 12840,		reports.....	13957, 14078
12902, 12911, 12960, 12965,		EURATOM reactor fuel manage-	
12985 14416, 14433, 14539,		ment program—	
14551, 14583, 14590, 14647,		fuel cycle analysis.....	5977
16012, 16052, 16150, 16163,		physics analysis.....	5976
16176, 16238, 16250, 16412,		synthesis of results.....	8064
16436, 16484, 16533, 18227,		European earwigs, control around	
18264, 18283, 18298, 18377,		home.....	19079
18457, 18528, 18561, 18575,		European Economic Community:	
19860, 19926, 19967, 20036,		agricultural policy.....	1324
20063, 20081, 20096, 20180,		agricultural trade and finance, sta-	
20211, 20358, 21387, 21428,		tistics.....	14172, 15837
21455, 21515, 21529, 21569,		Common Market, articles.....	15370
21625, 21641,		cotton textile industry and con-	
local preparation of policy		sumption, prospects in EEC.....	21823
plans, experiences.....	2561	is Europe our market? (address)...	861
social science research studies in		private trade barriers, description	
progress, list.....	20812	and analysis.....	10150
sociological translations.....	925	United States poultry exports, im-	
1135, 1274, 2675, 2901, 5189,		impact of regulations, state-	
5312, 5358, 6931, 6950, 6975,		ments.....	6506
6999, 7143, 7274, 7288, 8867,		United States trade, 1962-63.....	18178
8871, 8951, 8969, 9043, 9185,		wage costs and trade advantage	
9248, 9299, 10808, 10860, 10892,		compared with Great Britain	
10926, 11026, 11036, 11091,		and U.S.....	10305
11152, 11204, 11232, 12638,		European Free Trade Association,	
12667, 12722, 12743, 12765,		United States trade, 1959-	
12786, 12989, 13022, 14490,		63.....	21077
14527, 14598, 16011, 16053,		European War, 1914-18, (see Pen-	
16196, 16216, 16246, 16374,		sions,	
16388, 18217, 18378, 18461,		Europeans, social democrats, eco-	
18499, 18566, 18605, 19862,		nomie-political ideas, 1964.....	7250
19925, 19978, 20020, 20083,		Evacuation:	
20213, 20238, 20308, 20397,		dependents of Armed Forces from	
20402, 21418, 21456, 21565,		Panama and Cyprus, payment	
21571, 21680, 21618,		of expenses, authorize—	
Europe and space, French study.....	1133	hearing.....	19591
foreign relations, of U.S., 1943—		law.....	19421
departmental edition.....	13463	reports.....	13937, 19563
document edition.....	12016	Evaluation and research program of	
isostatic anomalies, data indicates		U.S. censuses of population	
nature of vertical movements		and housing.....	185, 10067, 15322-323
of earth's crust, USSR study.....	6879	Evans, Francis L., III., bibliography	
market indicators.....	4850	on synthetic detergents in wa-	
new dimension in Atlantic partner-		ter and wastes.....	7690
ship (address).....	5698	Evans, Harold E., gold plated minia-	
tide tables.....	13813	ture ball bearings for high	
trade union federations, strained		speed vacuum performance.....	1478
relations.....	18358	Evans, John S., radio attenuation	
Upper Cretaceous strata, correlation		due to plasma sheath on hyper-	
with U.S. by means of amonites		sonic blunt-nosed cone.....	3021
west coast, lights and fog signals,		Evans, W. Duane, remarks, May 21,	
list.....	5578, 16780, 21814	1964.....	13076
Western—		Evans County, Ga., cardiovascular	
apprenticeship role in manpower		disease field study.....	11551
development.....	10430	Evanston, Ill., railroad accident.....	879
cartelization, general informa-		Evaporated milk, see Milk.	
tion.....	16872	Evaporation:	
food balances for 16 countries,		liquid film, during nucleate boiling,	
1959-61.....	17908	nature.....	21750
market for U.S. soybeans and		physiologic water loss, measure-	
soybean meal.....	766	ment.....	13727
population study.....	2115	rates, organic lubricants in vac-	
rehabilitation programs and facili-		uum.....	5517
ties.....	1651	studies (series).....	8763
research studies completed, list.....	7754	surface energy balance in arid lands	
research studies in progress, list.....	9790	agriculture.....	4219

	Entry
Evaporators:	
multi-stage flash, chamber ge-	
ometry-----	19816
wiped film distillation, economic	
and technical evaluation-----	19815
Everett, Floyd D.:	
mineral industry of Wyoming-----	1427
tellurium resources in Arizona,	
etc-----	5493
Everett, N. B.:	
cell proliferation in adrenal of con-	
trol and cold exposed rats-----	4247
recirculation of lymphocytes-----	19141
Everglades National Park:	
land addition-----	
law-----	19396
reports-----	14054, 17537
Everhart, Philip E., heat transfer	
distribution on swept slab delta	
wings-----	21772
Evidence:	
rules discussed in transportation	
proceedings of ICC-----	6873
testimony by employees and produc-	
tion of records in legal pro-	
ceedings, Federal aviation	
regulations, change-----	4683
Evolution:	
animal organs, USSR studies-----	21415
avian genus Clamator, evolution-	
ary trends-----	21869
Ewing, C. T., high temperature prop-	
erties of sodium and potas-	
sium-----	5614
Examinations:	
Armed Forces Qualification Test,	
job performance of enlisted	
men scoring low-----	15276
Army enlistment screening test,	
feasibility of abbreviated	
forms-----	15275
Army simulated branching tests,	
preliminary evaluation-----	15274
Foreign Service career reserve off-	
icer, USA, sample questions-----	7748
Foreign Service officer, State De-	
partment, sample questions-----	7748
professional service for vocational	
rehabilitation agencies-----	9872
see also Civil service--also type or	
subjects of examinations.	
Examiners, see Hearing examiners.	
Excavating machinery:	
Federal item identification guides	
for supply cataloging-----	12259
supplements-----	3470
Excavation:	
comparison of State safety codes	
with ASA, chart-----	2947
penetration of shaped charges into	
frozen ground-----	8516
tunneling in permafrost-----	10487
Exceptional children, see Children.	
Excess property, see Surplus property.	
Exchange offering of U.S. savings	
bonds, series H-----	11670
Exchanges (international), see Inter-	
national exchanges.	
Excise taxes:	
compendium of papers on struc-	
ture-----	12163
computing constructive sales price,	
amend act-----	
law-----	17429
reports-----	17615, 17748
Federal structure--	
hearings-----	19522
panel discussion-----	14020
interest equalization tax on for-	
eign securities-----	
digest of testimony, etc-----	10348
hearings-----	14134
law-----	17421
reports-----	2075, 6302, 15724, 17592

	Entry
Excise taxes--Continued	
IRS loose-leaf regulations system-----	855-
859, 2447, 3697, 4837, 12546,	
15979.	
rates, extension--	
hearings-----	12164
law-----	15354
reports-----	12083, 12089, 13955, 14057
see also names of items taxed.	
Excitation (psychology):	
nervous activity, changes in phys-	
ico-chemical properties of cere-	
bral proteins, USSR study---	10739
Exciters (voltage regulating):	
static regulator, technical manual---	7730
Executive departments, see Govern-	
ment offices--Government	
reorganization plans--	
Government supplies.	
Executive Mansion, White House	
First Ladies dresses, National	
Museum exhibit-----	1583
Executive Office of the President:	
appropriations, 1965--	
hearings-----	6341, 12251
law-----	17251
reports-----	8297, 14048, 15497
Executive offices, see Government	
offices.	
Executive Papers, Joint Committee on	
Disposition of, reports-----	2043,
4463, 4481, 6294, 8293, 8333,	
10207, 10214, 10251, 12074,	
13931, 15488, 15499, 17593,	
17620, 19462.	
Executives:	
future in savings and loan industry	
(address)-----	19684
training and development, Army	
pamphlet-----	13677
Exercise:	
plan prepared by President's Coun-	
cil on Physical Fitness--	
vigor, for boys-----	11539
vim, for girls-----	11540
Exfoliative cytology, see Cytology.	
Exhibitions:	
Canadian Universal and Interna-	
tional, United States participa-	
tion, appointment of commis-	
sioner general, authorize--	
law-----	19394
reports-----	15708, 17520
Exhibitions, see subject.	
Exhibits:	
technician and specialist, examina-	
tion announcement, amend-	
ment-----	6079
traveling, framed reproductions	
from National Gallery of Art-----	7584
U.S. exhibits, international trade	
fairs, 1964-----	6862
Exodontia, hematologic changes fol-	
lowing simple exodontia-----	5900
Exosphere, spectrum of hydromag-	
netic waves-----	7554
Expansion (thermal):	
allowed by flexible fastener-----	14831
behavior, of alkali-metal and mer-	
cury vapors flowing through	
nozzles-----	18789
effect on built-up roofing-----	3053, 7581
Expansion tubes, isentropic 1-dimen-	
sional unsteady expansions in	
equilibrium real air with par-	
ticular reference to shock-initi-	
ated flows, charts for analysis---	11420
Expedience and goal in social develop-	
ment, USSR-----	10781

# INDEX 1964

Expenditures:	Entry	Explosions:	Entry
consumer expenditures and income—		explosibility of metal powders, study—	18698
Anchorage, Alaska—	2951	explosion-generated motion scaling laws validity, case study—	14754
Athol, Mass.—	11269	explosion-proof testing techniques—	7957
Bakersfield, Calif.—	9381	gasdynamics of combustion—	21779
Baton Rouge, La.—	7372	possibility of using deep explosions for seismic investigations in deep-sea regions by reflected waves method, USSR study—	16513
Cambridge, Ohio—	11272	potential aircraft fuel tank explosions caused by atmospheric electricity—	7550
Crookston, Minn.—	11272	Project Pre-Schooner, field cratering experiment—	21013
Denver, Colo.—	1368-69	research and technologic work—	
Durham, N.C.—	2956, 5427	1961—	1403
Eureka, Calif.—	11271	1962—	14738
Fairbanks, Alaska—	1366	S-IV all systems vehicle, investigation—	20567
Florence, Ala.—	11-70	space-cabin atmospheres, blast hazards—	11358
Gainesville, Tex.—	11270	see also Atomic bombs—Mine explosions—Nuclear explosions.	
Green Bay, Wis.—	2957, 5428	Explosives:	
Honolulu, Hawaii—	1370-71	Federal item identification guides for supply cataloging—	12297
Ketchikan, Alaska—	1367, 5426	supplements—	3478
Lancaster, Pa.—	2952-53	in granite, determination of detonation properties, comparative studies—	13114
Las Vegas, Nev.—	9379-80	in limestone, comparative studies—	9512
Logansport, Ind.—	11272	penetration of shaped charges into frozen ground—	8516
Mangum, Okla.—	11270	research and technologic works—	
Manhattan, Kans.—	11272	1961—	1403
Martinsville, Va.—	11270	1962—	14738
Menasha, Wis.—	11272	rock, decoupling effect on explosion-generated strain pulses—	5481
Millville, N.J.—	11269	testing, abatement of noise—	5494
Okmulgee, Okla.—	11270	see also Atomic blasting.	
Orem, Utah—	11271	Export control act of 1949, see Exports.	
rural nonfarm areas in—		Export Expansion, White House Conference on, see White House Conference on Export Expansion.	
northeastern region—	18626	Export-Import Bank of Washington: annual report, 1964—	21285
southern region—	18627	appropriations, 1964—	
United States—	16586	hearings—	2229
western region—	14687	law—	1985
Sebring, Fla.—	11270	reports—	2098-99, 2103, 12045
Southbridge, Mass.—	11269	appropriations, 1964, limitation, reports—	2069, 2220
urban places—		audit report, 1963—	
north central region—	13044	departmental edition—	6755
northeastern region—	13043, 18621	document edition—	10171
southern region—	13045	foreign assistance appropriations, 1965—	
western region—	14686, 18622	hearings—	19588
urban United States—	11268	law—	21126
urban United States, detail—	18623-625	reports—	13950, 13952, 19582
Wichita, Kans.—	2954-55	foreign operations appropriations, 1965, hearings—	12117
House Members, office expenses outside District of Columbia, reimburse, report—	17590	guaranty of obligations of Communist countries, prohibit—	
residential properties, additions, alterations, etc.—	17084	hearings—	524
working mothers, job-related expenses—	6053	report—	485
see also subject for which expenditures are made.		loan and guarantee operations, report—	
Expenditures of United States Government:		Jan. 1-June 30, 1963—	12027
combined statement, 1963—	4175	July 1-Dec. 31, 1963—	17448
monthly statement—	3747	report, 1963—	644-645
Experiment stations, see Agricultural experiment stations.		semiannual report—	10495
Experimental biology and medicine bulletin (USSR periodical):		Export trade, see Commerce.	
translations—	16142	Exporters, enforcement provisions and denial of export privileges, regulations—	12550
Experiments and experimentation:			
field, for control of cabbage insects—	13563		
pharmacology, USSR studies—	20246		
Experts, academic, views on East-West trade, compilation, print additional copies, report—	19573		
Explanatory bulletins, Wage and Hour and Public Contracts Divisions—	7836		
Exploding conductors, final report, June 30, 1960-June 30, 1963—	13333		
Explorations:			
archeological, Mongolia, 1961-62—	10911		
electrical, principles of, USSR study—	6983		
geochemical, near Gatchell mine, Humboldt County, Nev.—	15943		
Gulf of Alaska scallop—	14272		
moon, systems for Apollo—	7471, 9536		
Explorer, see Satellites.			

	Entry
<b>Exports:</b>	
airborne, foreign trade reports.....	3533-34, 4110
BDSA export potential study (series).....	143-144, 19279
commodity code book.....	12564
comprehensive schedule.....	8809
Connecticut's export potential, increasing (address).....	223
control—	
carrier's role.....	860
quarterly report.....	3448
regulations, summary.....	10708
current export bulletin.....	3389
enforcement provisions and denial of privileges, regulations.....	12550
expansion (address, remarks, etc.).....	4414, 21097
11977, 15365, 19347, 19353, farm (address).....	20907
Florida's export potential, means for increasing (address).....	8179
foreign trade, reports.....	3531
foreign trade, summary reports, monthly.....	4113-16, 4120
import-export overtime law, clarify, report.....	15514
importance (address).....	8182
information for American business, reports prepared by Foreign Service, list.....	4868
licenses approved and reexportations authorized, list.....	3449
manufacturers' sales and orders—	
current industrial reports.....	3390
durable goods, summary 1963, current industrial reports.....	8119
market potentials (remarks).....	21098
meeting challenge of trade (address).....	15372
mutual defense assistance control act of 1951, report.....	3144
one world, one market (address).....	11971
our multi-billion dollar export trade (address).....	21372
President's E award for export excellence, presentation to—	
Bacharach Industrial Instrument Co. (remarks).....	17159
Crutcher-Rolls-Cummings, Inc. (address).....	19349
International Telephone and Telegraph Export Corporation (remarks).....	19357
Jenks Metal Export, Inc. (remarks).....	19360
Sierra Tale and Chemical Co. (remarks).....	17160
Smith, Kirkpatrick & Co., Inc. (remarks).....	19362
Thew Shovel Co.....	4413
Willson International Ltd., Inc. (remarks).....	19361
privileges, denial and probation orders currently affecting.....	6842, 15981
profits, low cost marketing aids.....	19822
programmes d'assurance et garantie de credit applicables aux exportations des Etats Unis.....	13824
selling around world, how Commerce Department helps.....	19364
statistical classification, schedule B.....	4007, 13748, 13770
strengthening promotion activities at home (address).....	4410
technical data exportation, regulations, etc.....	8810
total trade, summary reports, monthly.....	4120
trade by commodity, summary reports, monthly.....	4114
trade by country, summary reports, monthly.....	4115

	Entry
<b>Exports—Continued</b>	
trade by customs districts, summary reports, monthly.....	4116
U.S. commodities as related to output, 1962 and 1961.....	8141
announcement and order form.....	10071
U.S., working day and seasonal adjustment factors and months for cyclical dominance, 1948-63.....	10075
Utah's role in international trade, what you should know about exporting, how to get started handbook.....	8178
see also Commerce—also names or classes of articles exported.	19826
Exposure, see Cold.	
Expropriation:	
losses, tax treatment, report.....	19579
ten-year carryover for corporations of capital losses—	
law.....	17429
reports.....	17615, 17748
Extension Service, Federal, see Federal Extension Service.	
Extension work:	
agents and specialists, working with low-income rural families.....	14237
cooperative service with low-income families.....	2314
aging persons.....	2316
migrant workers.....	2315
county extension organization and financing procedures.....	6629
programs benefit many (address).....	5812
your career as extension agent.....	20930
Extraction (chemistry):	
aluminum, from calcium aluminates in water, sodium hydroxide, and sodium carbonate solutions.....	20504
chemical composition of urea-extractable components of plague virus EV, USSR study.....	20387
manganese from ore with ferrous sulfate and pickle liquor.....	13128
solvent—	
beryllium, Spor Mountain, Utah, ore.....	14751
cerium, metathesis of bastnaesite.....	7457
fission product separation, final report.....	5983
naphthenic acid, of rare-earth sulfates.....	9513
recovery of thorium and yttrium from siliceous Colorado ores.....	13133
Extracts, see substances from which extracts are made.	
Extradition:	
convention with—	
Belgium, supplementary.....	14027
Israel.....	7774
report.....	424
Sweden.....	7783
report.....	424
treaty with Brazil, additional protocol, report.....	424
Extrapolation, 1 kc values of secondary standards to higher frequencies.....	1498
Extrusion processes, refractory metals, rapid billet loader aids.....	13179
Eyelet reinforcement, gummed cloth, Federal standard.....	2331
Eyes:	
care, frauds and quackery affecting the elderly, hearings.....	17862
disorders, summary of progress.....	18816
lasers, biological effects, concept of ocular damage.....	20702



# INDEX 1964

Entry	Entry
Eyes—Continued	
mammalian—	
posterior cortex of lens, migration of nucleated elements, USSR study.....	16152
radiation effects, literature survey, index.....	21015
oxygen and the eye, toxicity effects, perception of depth from binocular disparity.....	4313
preschool child's eyes, care, safety precautions, etc.....	21041
strain on visual analyzers, USSR study.....	11212
vision testing methods and binocular visual acuity findings, by age, sex, and race among adults aged 18-79 years, United States, 1960-62.....	13424
visual impairments, interviewing guides for specific disabilities.....	8502
Eyre, Dorothy, relief.....	10380
<b>F</b>	
F.A.A., see Federal Aviation Agency.	
F.A.O., see Food and Agricultural Organization of United Nations.	
F.C.A., see Farm Credit Administration.	
F.C.C., see Federal Communications Commission.	
F.C.S., see Farmer Cooperative Service.	
F.D.A., see Food and Drug Administration.	
F.D.C. regs.....	4749
F.H.A., see Farmers Home Administration—Federal Housing Administration.	
F.N.M.A., see Federal National Mortgage Association.	
F.P.C., see Federal Power Commission.	
F.P.C. R series.....	4702, 8552
F.P.C. S series.....	663, 2321, 6641, 12392, 19690
F.T.C., see Federal Trade Commission.	
FAA, see Federal Aviation Agency.	
Fabricated materials, nonmetallic, Federal Item Identification guides for supply cataloging, supplements.....	3476
see also names of materials fabricated.	
Fabrics, see Textiles—also names of fabrics.	
Facial paralysis, electromyographic investigation of Bell's palsy victims, USSR study.....	1172
Facilities and equipment fact sheet (series).....	18
Facilities handbook series.....	20728-729, 21834
Facilities maintenance cost accounting handbook.....	649
Facilities planning factors for naval shore activities.....	11729
Facility outage and equipment failure report (RIS SM 6040-5), FAA form 3092.....	12380
Factories:	
labor turnover, monthly release.....	3454
North Vietnam, production protection at construction sites, additional material.....	6877
occupations, not requiring specialized training, employment outlook.....	9427
Facts about America.....	11908
Facts about Community Relations Service as provided under 1964 Civil rights law.....	17158
Facts about USIA.....	20866
Facts about USIA audience, the world.....	5786
Facts on aging series.....	3191, 16922
Factual campaign information.....	8404A, 14021, 19524
Faculae, precise determination of source function.....	20627
Faculty (schools):	
changes in number of faculty members in 1058 institutions of higher education, by rank and length of contract, 1960-61 and 1962-63.....	17911
professional staff in institutions of higher education, summary reports—	
1959-60.....	608
1963-64.....	12327
salaries in colleges and universities, 1963-64, preliminary report.....	2278
teaching in higher education, 1962-63, primary teaching areas and contract salaries.....	6575
Fahnestock, Robert K., morphology and hydrology of glacial stream, White River, Mount Rainier, Wash.....	4791
Fair employment practice, see Discrimination in employment.	
Fair labor standards act, see Labor standards.	
Fair Play for Cuba Committee, Castro's network in United States, hearing.....	538
Fairbanks, Alaska:	
consumer expenditures and income, 1959.....	1366
land previously conveyed, terminate restriction on use for urban renewal project—	
law.....	17268
reports.....	8300, 15735
soil survey of area.....	1593
Fairbrook, Paul, starting and managing small restaurant.....	7731
Fairchild Camera & Instrument Corporation, overpricing CAX-12 aerial reconnaissance cameras under negotiated contract, Air Force Dept., GAO report.....	8729
Fairs:	
Detroit, Mich., world's fair, 1972, hearing.....	6353
international trade fairs, U.S. exhibits, 1964.....	6862
U.S. trade, show world, sell world.....	4849, 14371
Fakan, John C., degradation effects in short samples of hard superconductors.....	14878
Falcon Dam:	
construction, claims of inhabitants of area inundated by floods of Rio Grande, settlement—	
law.....	17306
reports.....	2038, 17705
Falke, Wilbert L., hydrometallurgical recovery of manganese from manganiferous slimes and lime-stones.....	7440
Fall River, Mass., area redevelopment manpower report.....	12333
Fall River County, S. Dak., geology.....	21348
Fallout, see Radioactivity.	
Falls, see Free fall.	
Falmouth, Mass.:	
beach erosion control study, engineer report—	
departmental edition.....	15867
document edition.....	15412
Falter, Kenneth H., measurement of iodine-131 in bovine thyroids.....	7697

# JANUARY-DECEMBER

	Entry		Entry
Families:		Family breadwinners, their special	
breadwinners, special training		training needs.....	7860
needs.....	11247	Family court.....	8142
by type, 1964, population char-		Family farms, see Farms.	
acteristics.....	15314	Family Services Bureau:	
characteristics and marital status,		general information.....	12354
workers, Feb. 1964.....	11297	how it goes about its job.....	2302
characteristics of long term unem-		Fand, R. M., acoustical vibrations in-	
ployed, 1961-62.....	4656	fluence on convective heat	
coordination in location of absent		transfer to liquids.....	8801
parents of children receiving		Fankhouser, James C., on motion and	
aid.....	4672	predictability of convective	
day care for your child in family		systems as related to upper	
home.....	21043	winds in case of small turning	
dinner service specialist, suggested		of wind with height.....	20879
training program.....	15845	Fanny Peak quadrangle, Wyo.-	
family economics review.....	3455	S. Dak., geology.....	2412
family life in times of stress (ad-		Fans, see Ducted fans—Electric	
dress).....	8784	fans—Mechanical fans—Wind	
family service for civil defense,		machines.....	
handbook.....	10094	Fante, Ronald L.:	
farm, adequate and fair income (ad-		kinetic equations for plasma includ-	
dress).....	5803	ing radiation in external mag-	
food.....		netic field.....	13699
budget costs, intercity differ-		spectral density of radiation scat-	
ences.....	2970	tered by non-equilibrium	
budgeting for good meals and		plasma.....	13697
good nutrition.....	4204	FAO, see Food and Agriculture Or-	
stockpile for survival.....	16953	ganization of United States.	
housing and Negro serviceman.....	10099	Far East, see East (Far East).	
income.....		Farber, David J.:	
and related characteristics among		apprenticeship and economic	
low-income counties and		change.....	4274
States.....	21926	estimated number of apprentices,	
metropolitan areas, 1960.....	6034	1962.....	85
median family income and related		Farish, George G.:	
data, by counties, including		occupational wage survey—	
rural farm income.....	5861	Atlanta, Ga.....	18632
size by family characteristics,		Birmingham, Ala.....	16596
1960.....	8106	Greenville, S.C.....	16601
sources and structure, 1960.....	10074	Jackson, Miss.....	11282
low income.....		Jacksonville, Fla.....	9465
cooperative extension service		New Orleans, La.....	11283
work with—		Norfolk, Portsmouth and New-	
aging.....	2316	port News, Hampton, Va.....	18635
families.....	2314	Richmond, Va.....	7412
migrants.....	2315	Savannah, Ga.....	16602
1960, statistics.....	6033	Farm animals, see Livestock.	
rural families, working with.....	14237	Farm buildings:	
rural family spending and con-		building plans—	
sumption, Kentucky.....	19081	5-bedroom farmhouse with base-	
maternal employment and child		ment.....	1709
rearing, personal factors.....	8144	4 bedroom farmhouse, frame con-	
national and regional statistics on		struction.....	19098
social, economic and housing		4-bedroom farmhouse with base-	
characteristics, by type.....	192	ment.....	19093
persons by family characteristics,		storage, storm and fallout	
family members by social, eco-		shelter.....	1711
nomie, and housing character-		3-bedroom farmhouse, with base-	
istics of their families.....	15326	ment.....	19094
public assistance for dependent		cooperative farm building plan ex-	
children, State cost standards		change (series).....	1709-11,
for basic needs, Jan. 1963.....	10496	4214-15, 7935, 19093-99	
public welfare services, staff train-		farmstead sewage and refuse dis-	
ing project.....	7852	posal.....	22
Puok people of northwest Vietnam,		plumbing repairs.....	19072
materials on social and family		use of stabilized earth block in	
organization.....	10976	farm construction.....	7953
research relating to children, stud-		Farm credit, neglected farms, credit	
ies in progress.....	17120	assistance, Polish article.....	2551
retired serviceman's family protec-		see also Agricultural credit.	
tion plan.....	20982	Farm Credit Administration:	
rural, major health problems.....	5655	appropriations, 1964, law.....	1978
shopping, publications list.....	15038	appropriations, 1965—	
with dependent children—		hearings.....	10286, 15790
AFDC in review 1936-62.....	7845	law.....	17431
implications of AFDC eligibility		reports.....	10258, 15771
review (address).....	13534	audit report, 1963.....	4754, 10163
public assistance for education,		bulletin.....	10501
AFDC survey.....	11714	report, 1962-63—	
State public assistance plans		departmental edition.....	8527
under social security act, staff		document edition.....	8242
development provisions.....	12355	Farm equipment, see Farm implements	
see also Income.		and machinery.	

# INDEX 1964

Entry	Entry
Farm equipment stores, <i>see</i> Stores.	Farm youth, <i>see</i> Youth.
Farm implements and machinery:	Farmer, Evelyn M., United States Department of Commerce publications, 1963 supp.----- 17164
current industrial reports.--- 3391, 13754	Farmer, Robert E., Jr., cottonwood improvement system for commercial planters.----- 18076
changes ----- 17091, 21029	Farmer Cooperative Service:
Federal item identification guides for supply cataloging.----- 12290	appropriations, 1965, Agriculture Dept., hearings.----- 10286
supplements ----- 3471	FCS circular ----- 646
requirements for closely spaced peanut plantings.----- 4220	general reports.----- 12357-358, 15879, 17961
RSFSR farm equipment problems.--- 1194	information series.----- 2303, 6606, 14220
USSR--	publications, list.----- 14220
industrial development, translations ----- 926,	Farmer cooperatives, North Carolina, tobacco and cotton industry problems (address)----- 1692
938, 1194, 1273, 1317, 2574,	Farmers:
2635, 2801, 2822, 2836, 2878,	agricultural problems and conditions (address)----- 1691
4916, 4953, 5014, 5036, 5052,	checklist for pesticide safety----- 15219
5180, 5222, 5967, 7273, 7313,	farmer's world, yearbook of agriculture, 1964--
8927, 8937, 8998, 9047, 9175,	departmental edition.----- 16952
9268, 10915, 11053, 12609, 12704,	document edition.----- 17450
12777, 12825, 14570, 16021,	fertilizer science and American farmer ----- 21899
16385, 16401, 16511, 18287,	financial calculations and physical measurements, handbook ----- 7011
18409, 18432, 19904, 20022,	errata ----- 13579
20042, 20260, 20279, 20282,	gas tax refund ----- 19819
20306, 20379, 21436, 21501,	income tax reduction, significant provisions ----- 8470
21643, 21651.	liquid petroleum fuel used in 1959, etc ----- 9964
planning cost and tentative prices ----- 2635	major health problems ----- 5655
Farm income, <i>see</i> Income.	migration, annotated bibliography, 1946-60 ----- 38
Farm index (periodical)----- 3457	needs, training and services in agriculture ----- 19091
Farm labor:	publications, list ----- 4830
agricultural workers and workmen's compensation ----- 11253	self employed--
coverage of agricultural workers under State and Federal labor laws ----- 13032	are you getting your social security credit?----- 1587, 21875
good day-haul practices, standards ----- 16585	social security information.----- 5688, 20797
hired farm working force, 1962.--- 2263	worker and farmer share role in building Great Society (addresses) ----- 13575-576
housing assistance, hearing.----- 2231	<i>see also</i> Farmers' cooperative organizations.
housing loans ----- 15218	Farmers' bulletins.----- 24-27,
market developments ----- 3459	1699-1700, 4199-4202, 5825-26,
employment and wage supplement ----- 3460	7918, 9038-42, 11755-757, 13583,
market, today's realities (address) ----- 6585	15208, 16951, 19066-73, 20912-918.
methods of protecting health of rural workers, USSR study.--- 20118	Farmers cooperative organizations:
Mexican farm labor program, extend, law ----- 1932	cotton ginning costs at single-gin and 2-gin plants.----- 5835
migratory--	court cases, summary, legal series.--- 4067
community efforts to improve conditions ----- 18613	electric, REA financing, hearing.--- 15578
contractor registration--	farm business tools.----- 4196
appropriation, 1965, proposal, report ----- 19527	fertilizer bulk blending plants in upper Midwest.----- 15879
law ----- 19390	management ----- 646
Mexican workers, agreement with Mexico ----- 7781	management, improving.----- 12357
problem in U.S., report.----- 6484	motortruck operating costs.----- 12358
monthly report.----- 3458	news for farmer cooperatives.----- 3794
Soviet agricultural workers urged to make full use of mechanized equipment and increase productivity ----- 21421	opportunities in rural area development (address)----- 5804
status of agricultural workers under State and Federal labor laws ----- 16580	statistics, 1961-62.----- 17961
used to produce field crops, estimates by States.----- 9965	USDA policy and programs (address) ----- 5805
used to produce vegetables, estimates by States, 1959.----- 9963	what can they offer farmers for the future?----- 2303
voluntary methods of recruiting, training, distributing, etc., authorize, hearings ----- 10431	Farmers Home Administration:
your guide to farm jobs, Intermountain States.----- 4662	appropriations, 1965, Agriculture Dept., hearings.----- 10286, 15790
Farm machinery, <i>see</i> Farm implements and machinery.	consolidated act of 1961, amend, hearing ----- 15581
Farm management, <i>see</i> Farms.	farm-mortgage lending experience ----- 8477, 12317, 19622
Farm mechanics, <i>see</i> Mechanization.	farm ownership loans.----- 9957
Farm milk tanks, <i>see</i> Tanks.	
Farm mortgages, <i>see</i> Mortgages.	
Farm ponds, <i>see</i> Fish ponds.	
Farm products, <i>see</i> Agricultural products--also names of products.	

# JANUARY-DECEMBER

	Entry		Entry
Farmers Home Administration—Con.		Farrell, John H., small-woodland	
insured housing loan program for		owner in Missouri Ozarks,	
elderly in rural areas, extend—		close-up	12473
law	13889	Farrior, Gilbert M., corrosion resist-	
reports	12091, 14058	ance of diborides in pseudo-	
loan limitation, increase, report	13949	binary system TiB <sub>2</sub> -CrB <sub>2</sub>	11324
loans—		FAS-M series	766, 2347-48,
for farm labor housing	15218	8627, 10583, 12429-430, 14289-	
general information	5842	292, 18042, 19744, 21323.	
Farmhouses:		Fascism, Vatican blamed for con-	
farm building plans—		doning, USSR views	11038
5-bedroom house with basement,	1709	Fast reactor mobile blankets, <i>see</i>	
4-bedroom farmhouse, frame		Reactors (atomic).	
construction	19098	Fast reactors, <i>see</i> Reactors (atomic).	
4-bedroom farmhouse with base-		Fasteners, flexible, allows thermal ex-	
ment	19093	pansion	14831
3-bedroom farmhouse, with base-		Fastie, William G.:	
ment	19094	instrumentation for far ultravio-	
Farming, <i>see</i> Agriculture.		let rocket spectrophotometry	9601
Farmington-Granby area, Conn.,		rocket spectrophotometer airglow	
geology and ground water	10654	measurements in far ultra-	
Farms:		violet	14889
conservation reserve program and		Fat, variations of intake, effects on	
land use adjustment program,		characteristics of growth	9976
statistical summary, 1963	9928	<i>see also</i> Fats.	
cost situation, 1964 outlook issue	566	Fatigue:	
costs and returns, commercial, by		and oxidation of high-temperature	
type, size, and location	13582	alloys, USSR study	12783
family—		and stress under conditions of iso-	
backbone of American agricul-		lation from external stimuli,	
ture (address)	5802	USSR study	12918
essential to American unchal-		auditory, pure tone, central factor	4317
lenged world leadership in		occupational psychology, reflexo-	
agriculture (address)	5807	metric and tremometric meth-	
in American agriculture	11754	ods, USSR study	1228
farm family agriculture (address)	5803	physical, mitigation with spartase	4314
farm programs, their future		Fatigue of materials, <i>see</i> Strains and	
(remarks)	7905	stresses.	
farm vacation enterprises in		Fats:	
Ohio	14168	current industrial reports	3390, 10051
flooded, first aid	20908	economic potential of soaps, deter-	
management—		gents, and surfactants	10455
guidelines for suggested pro-		edible, market potentials	11771
gram	21265	fats and oils situation	3462
publications, price list	15036	foreign agriculture circulars	3520
non-real-estate, debt owed to non-		<i>see also</i> Fat.	
reporting creditors, etc., re-		FATT, transient temperature compu-	
vised estimates, 1949-64	17906	ter program for EGCR core	11858
our 100,000 biggest farms, their re-		Fatty acids:	
lative position in American		plasma nonesterified, in rates sub-	
agriculture	6553	jected to gravitational accele-	
ownership, FHA loans	9957	ration	16729
planning, for profit and stability	4199	progressively fluorinated, behavior	
population		of monolayers adsorbed on wa-	
estimates, 1963	17904	ter	5592
older, 1960-63	16922	Faught, C. K., Jr., remarks, Aug. 3,	
series Census-FRS	10062	1964	15374
production and efficiency changes,		Faulkner, Rafford L., remarks, Sept.	
summary report 1964	13598	16, 1964	19262
profits, improvement by cutting		Fault isolation techniques, <i>see</i> Project	
costs	1700	FIST (fault isolation by	
radioactive fallout defense	19068	semi-automatic techniques).	
real estate market developments	3461	Fauna:	
replenishing underground water		China, economic	8904
supplies	20925	reconstruction in Caspian Sea,	
rope uses, etc.	20916	USSR study	7178
safety week	9956	trilobite, Lower Cambrian, from	
socialized, expanding arable area	18427	Nevada	21356
use of single-phase electric mo-		western Pacific, conference on joint	
tors	19070	investigations of, USSR study	7172
vacation businesses—		<i>see also</i> Mammals—Marine fauna—	
New England	19620	Vertebrates.	
planning helps	5848	Faust, Mattie M.:	
vegetable gardens	4203	comparability of mortality statis-	
<i>see also</i> Electricity—also headings		tics for 5th and 6th revisions,	
beginning Farm.		United States, 1960	1568
Farmsteads, <i>see</i> Farm buildings.		comparability ratios based on mor-	
Farnes, P. E., water supply outlook		tality statistics for 5th and 6th	
and Federal-State-private co-		revisions, United States, 1950	7710
operative snow surveys for		Faust, W. R., exploding conductors	13353
Montana	4140	Favorite, Felix, North Pacific ocean-	
Farnsworth, Virginia M., prices, etc.,		ography, Feb.-Apr. 1962	10576
of peanuts in peanut butter	1706	Fay, Elmer R., sr., relief	4447, 6141
		Fayette County, Tenn., soil survey re-	16867
		port	



# INDEX 1964

Entry	Entry
FBI, <i>see</i> Federal Bureau of Investigation.	Federal Aviation Agency—Continued
FCA, <i>see</i> Farm Credit Administration.	fees for copying and certifying FAA records, FAA regulations..... 15885
FCC, <i>see</i> Federal Communications Commission.	field facility directory..... 3506
FCS, <i>see</i> Farmer Cooperative Service.	flight service stations, evaluation—
FCST, <i>see</i> Federal Council for Science and Technology.	hearings..... 17654
FDA, <i>see</i> Food and Drug Administration.	report..... 17633
FDIC, <i>see</i> Federal Deposit Insurance Corporation.	general aviation inspection aids, summary..... 15886
Feasibility of Krupp-Renn process for treating lean iron ores of Mesabi Range, digest..... 13665	inadequate administration of automatic data processing operations, air route traffic control centers, Boston, Mass., and Washington, D.C. GAO report..... 8723
Feces:	information retrieval list..... 17070
human waste—	modernized flight service station system..... 17017
combustion and product recovery..... 7086	organization, administration, services, etc..... 19669
gross chemical changes while undergoing thermal decomposition..... 7085	personnel, redeployment, 1963, report..... 8337
Fecundity:	press releases..... 8880
fish fertility and roe size, USSR study..... 4917	publications..... 12383
women, fertility by social, economic, and housing characteristics, census of population, 1960..... 11914	rental of punched card machines, excessive payments, GAO report..... 12489
Fedde, Gerhard F., elm spanworm..... 767	report, 1963..... 10509
Federal agencies, <i>see</i> Government offices.	rule making procedures, FAA regulations..... 19670
Federal aid, <i>see</i> Grants-in-aid—also subjects.	SRDS abstracts of technical reports, general distribution, supplement..... 15132
Federal airport act, <i>see</i> Airports.	statistical handbook of aviation technical standard order TSO (series)..... 4684
Federal assistance for projects in aging..... 7848-50, 9884, 15166-67	unnecessary costs incurred under semiautomatic flight inspection program, GAO report..... 8738
Federal assistance in outdoor recreation available to States, their subdivisions, organizations, individuals..... 9689	user charges required by prescribed Government policies not assessed against recipients of Government services, GAO report..... 8708
Federal Aviation Agency:	Federal buildings, <i>see</i> Public buildings.
activity, FAA airways system, summary, 1963..... 8530	Federal Bureau of Investigation, agents, employment outlook..... 9416
advisory circulars..... 17020, 17021	Federal civil defense guide..... 203,
air traffic activity, summary 1964..... 17963	1835-37, 4366-70, 8148-50,
aircraft procurements, utilization, etc., deficiencies, GAO report..... 8711	10089-93, 11026, 15340-341,
airworthiness directives..... 8247,	19319-325.
3451, 21287	Federal civil service, <i>see</i> Civil service.
appropriations—	Federal Coal Mine Safety Board of Review:
1965 and 1966, amendment..... 10160	appropriations, 1965—
1965, hearings..... 10290	hearings..... 6338, 8436
bibliographic lists..... 6607-15, 17962	law..... 13904
civil aeronautical manuals..... 647, 6616	reports..... 8288, 8420, 13951
status..... 6622, 12385, 21293	reconstitute, report..... 4457
civil air regulations..... 648, 4675, 19667	Federal Commission on Disposition of Alcatraz Island, <i>see</i> Alcatraz Island, Commission on Disposition of.
amendments..... 2304,	Federal Communications Commission:
4676-78, 8528-29, 10504-506,	actions in docket cases, reports..... 8464
12359-378, 14222-225.	actions on motions, reports..... 3164
conduct and discipline program handbook..... 12379	appropriations, 1965, hearings..... 10290
contractions used in air traffic control, etc., handbook..... 4267	authorization for certain nonbroadcast operations—
definitions and abbreviations, Federal aviation regulations..... 6617,	hearing..... 10320
10510, 14227, 17964	law..... 12002
efficiency and economy in operations, report..... 4452	report..... 10226
electronic air traffic control simulator systems, excessive costs incurred because of extended contractor furnished technical services, etc., GAO report..... 10596	decisions and reports—
employees, arming, hearing..... 21208	July 13-Dec. 29, 1962..... 17971
FAA handbook series..... 649,	Jan. 11-July 5, 1963..... 19676
4680, 10507, 12379-382, 14226, 1968, 21286.	weekly..... 3465
Federal aviation regulations..... 650,	experimental, auxiliary and special broadcast services, rules and regulations..... 10515
2305-7, 8531-33, 4681-83, 6617-21, 10510-512, 12384, 14227-230, 15883-885, 17964-968, 19670-675, 21287-291.	fairness doctrine—
status..... 6622, 12385, 21293	current interpretation (address)..... 2309
	principle and application (address)..... 15887
	legal problems in administrative procedures (address)..... 21294

# JANUARY-DECEMBER

	Entry		Entry
Federal Communications Commission—Continued		Federal Deposit Insurance Corporation—Continued	
maritime services, radio stations on land, shipboard, etc., rules and regulations	3090	member, nomination of Joseph W. Barr, hearing	4574
memorandum opinions, etc.	3718	press releases	3882
nonbroadcast and general actions, reports	3464	report of call	654, 10518
organization, FCC rules and regulations	8987, 6624	Federal employees, see Government officials and employees.	
petitions for interventions before FCC—		Federal Employees compensation act, see Employers' liability and workmen's compensation.	
hearing	10320	Federal employment, see Employment.	
law	12001	Federal Employment Policies and Practices Committee, report	3090
report	10227	Federal expenditures, see Finance.	
practice and procedure, FCC rules and regulations	3087, 6624	Federal Extension Service:	
press releases	3881	appropriations, 1965, Agriculture Dept., hearings	10286
problems, procedures and policies (address)	2311	circulars	2314-16, 14237
prohibit from making rules re, broadcast advertising length, etc.		Extension Service review (periodical)	3450
hearings	2114	Federal Fire Council:	
reports	2080, 4483	fire experience, 1962	4773
public notices	3464, 3881	fire safety training and speakers directory	6793
radio broadcast services, rules and regulations	10515	library accessions, list	3682
regulatory authority over communications, common carriers, hearings	17653	minutes of meeting, Nov. 6, 1963	4772
report, 1963	4686	Federal focal point in outdoor recreation	20714
rules and regulations	6624-26, 5534, 10515-516	Federal fund-raising manual	17136
transmittal sheets	3087-95	Federal funds for research, development, and other scientific activities, 1962-64	14988
short history of electrical communication	12386	Federal Government, see Government.	
Federal Council for Science and Technology:		Federal guidance for State and local civil defense, FG series	6065
proceedings of 1st symposium, current problems in management of scientific personnel	8540	Federal Hall National Memorial: commemorative medal, liberty series—	
report, 1962	7724	law	6173
Federal courts, see Courts of United States.		reports	460, 2094
Federal credit unions:		Federal Home Loan Bank Board:	
act—		appropriations, 1965, hearings	10290
amended to July 2, 1964	19650	audit report, 1963	8706, 10186
amendments—		digest	3467
hearings	6346, 12253	inquiry into mortgage insurance companies, statement	14238
law	13901	press releases	3883
reports	2055, 12227	reserve regulations, amendments (address)	8543
bylaws, specimen copy	10517	savings and loan examiners, examination announcement	10102
credit manual	19679	Federal Home Loan Bank System:	
emergency preparedness guidelines	652	activities in changing world (address)	10519
general information	14234	combined financial statements, 1962, members of Federal Home Loan Bank System, income and expenses	655
handbook	21296	practitioner's evaluation (address)	19682
report of operations, 1963	14235	Federal home loan banks:	
Romney Federal Credit Union and its contributions to community	6606	audit report, 1963	6757, 10168
Federal Crop Insurance Corporation:		GAO audit, change to calendar year basis, amend act—	
appropriations, 1965, Agriculture Dept., hearings	10286	hearing	10314
audit report, 1963	10161, 10592	law	17377
Federal deposit insurance act, see Banks and banking.		reports	12054, 17746
Federal Deposit Insurance Corporation:		Federal Housing Administration:	
annual report, 1963	17972	audit report, 1963 and 1962	21164
assumption of employee benefits and change in audit dates, hearing	400	FHA housing for the elderly, projects and people	15893
assumption of employee benefits costs, report	356	FHA news release	3884
audit, change dates, report	356	FHA regulations	2320, 4695-96, 6633-35, 10521, 14243-245, 15892, 17974-977.
audit report, 1963	6756, 10165	manual, mortgagee's handbook, home mortgage programs, revisions	660, 8549
Board of Directors, nomination of Kenneth A. Randall, hearing	6497	minimum property standards for urban renewal rehabilitation	4699
deposits and share accounts, increase maximum coverage for each depositor, reports	4465, 10281	mortgage foreclosures, hearings	8438
insured banking offices, list	6628	mortgage insurance, expenditures to correct defects, hearings	2233
changes	3684		

# INDEX 1964

	Entry
Federal Housing Administration—	
Continued	
mortgage servicing activities inade-	
quacy, increased risk of loss,	
GAO report.....	6770
report, 1962.....	4691
technical studies, lists.....	658, 6637
technical studies report.....	14240
Federal item identification guides for	
supply cataloging.....	8463-65,
12288-294, 12296-297	
supplements.....	3468-78
Federal land bank associations, re-	
port, 1963.....	4673
Federal land banks, farm-mortgage	
lending experience.....	8477,
12317, 19622	
Federal lands, <i>see</i> Public lands.	
Federal Maritime Board:	
decisions—	
Apr. 1956-Apr. 1960.....	8550
Apr. 1960-Aug. 1961.....	21297
separates.....	3410
Federal Maritime Commission:	
activities (address).....	4701
activities, hearings.....	19518
appropriations, 1964—	
hearings.....	515
law.....	1974
report.....	511
appropriations, 1965—	
hearings.....	10288, 15791
law.....	17386
reports.....	10245, 21193, 21233
authority over domestic off-shore	
rates (remarks).....	21302
decisions, separates.....	3410
news releases NR series.....	3885
report, 1963—	
departmental edition.....	4700
document edition.....	4443
role in our expanding economy	
(remarks).....	8551
SP series.....	661,
4701, 6638-39, 8551,	10522,
12390, 19687, 21298-302	
terminal industry problems (re-	
marks).....	661
Federal Mediation and Conciliation	
Service:	
appropriations, 1965—	
hearings.....	8361, 17864
law.....	19413
reports.....	8343, 17778
report, 1963.....	12391
Federal mutual savings bank act, <i>see</i>	
Banks and banking.	
Federal National Mortgage Associa-	
tion:	
audit report, 1963.....	6758, 10175
news.....	3480
secondary market facility for con-	
ventional mortgages, develop	
as, hearings.....	526
Federal news clip sheet.....	3481
Federal Old-Age and Survivors Insur-	
ance and Disability Insur-	
ance Trust Funds, <i>see</i> Board of	
Trustees of Federal Old-Age	
and Survivors Insurance and	
Disability Insurance Trust	
Funds.	
Federal paperwork jungle.....	12150,
14014, 15599	
Federal Power Commission:	
annual report, 1963—	
departmental edition.....	6640
document edition.....	6221
appropriations, 1965, hearings.....	10290
daily news digest.....	3792
jurisdiction, amend act—	
hearings.....	15804
report.....	17712

	Entry
Federal Power Commission—Con.	
nomination of David S. Black,	
hearings.....	4576
practice and procedure rules.....	15901
publications lists.....	8553, 14252, 15900
R series.....	4702, 8552
regulations under Federal power	
act.....	12396
reports, opinions, decisions, and	
orders—	
bound volumes.....	662, 19688-689, 21303
monthly.....	3483
rules of practice and procedure.....	3996,
6643, 10528	
S series.....	663, 2321, 6641, 12392, 19690
Federal Prisons Industries, Inc.:	
annual report, 1963.....	16823
audit report, 1963.....	6759, 10170
Federal probation (periodical).....	3484
Federal procurement regulations:	
FPR circulars.....	3485, 19770
FPR notices.....	3486
Federal programs for the deaf.....	10463
Federal property, <i>see</i> Public property.	
Federal property and administrative	
services act, <i>see</i> Public prop-	
erty.	
Federal Radiation Council, reports.....	15902,
19702	
Federal register.....	3487
act, amend, law.....	270
codification guide and parallel	
table.....	3488
index.....	3489
Federal regulations, <i>see</i> Code of Fed-	
eral regulations— <i>also</i> subjects.	
Federal Republic of Germany, <i>see</i> Ger-	
many.	
Federal reserve agents fund, trans-	
actions.....	3600
Federal reserve banks:	
check clearing and collection, regu-	
lation, amendment.....	17988
condition, weekly statement.....	3453
direct purchase of U.S. obligations,	
extend authority—	
hearing.....	13096
law.....	13893
reports.....	12092, 14059
hours, opening and closing, and	
holidays.....	3811
interdistrict settlement fund, trans-	
actions.....	3600
State member banks, 1963, list.....	4719
Federal reserve bulletin.....	3490
Federal reserve chart book, financial	
and business statistics.....	3491
historical supplement.....	21312
Federal reserve member banks:	
assets and liabilities—	
monthly report.....	3269
summary report.....	3270
changes in State bank member-	
ship, weekly announcement.....	3313
condition, weekly statement—	
banks in leading cities.....	3348
banks in New York and Chicago.....	3349
demand deposits, currency, etc.....	3413
deposits, reserves, and borrow-	
ings, semimonthly report.....	3419
free reserve concept, Federal Re-	
serve's attachment.....	15585
loans.....	3716
reserves and credit, weekly aver-	
ages.....	3453
reserves of member banks, regula-	
tions, amdt.....	4717
State member banks, list, suppl-	
ments.....	4051
twenty largest stockholders.....	21204
Federal reserve par list.....	3492, 21313

# JANUARY-DECEMBER

	Entry		Entry
Federal reserve system:		Federal supply code, see Govern-	
accomplishments (statement)-----	4720	ment supplies.	
activities, and ways of improving		Federal Supply Service:	
system (remarks)-----	12405	excessive costs incurred by leasing	
after 50 years, bills to amend act,		rather than purchasing tele-	
hearings-----	8369, 10300, 15584	typewriting equipment, GAO	
print additional copies, re-		report-----	21334
ports-----	17502-563, 17817, 17819	mission, organization, etc-----	6692
foreign exchange operations and		uneconomical practices relating to	
gold pool-----	8588	brand name procurements, GAO	
foreign exchange operations, Mar.-		report-----	12494
Aug. 1964-----	17990	Federal system as seen by State and	
monetary policy making, analy-		local officials, results of ques-	
sis-----	21202	tionnaire dealing with inter-	
open market policy process-----	4716	governmental relations-----	2238
security transactions, 1954-63-----	15903	Federal tax policy, see Taxation.	
Federal Reserve System Board of Gov-		Federal Telecommunications System,	
ernors:		unnecessary cost of not using	
applications received, or acted on,		system, GAO report-----	8739
during week-----	3259	Federal test method standards-----	8590,
attachment to free reserve con-		15907, 17992	
cept-----	15585	Federal textbook on citizenship-----	12535-536,
hours, opening and closing, and		14300, 18157-158, 19810	
holidays-----	3811	Federal Trade Commission:	
members, nominations, hearings--		appropriations, 1965, hearings-----	10290
Daane, J. Dewey-----	525	decisions (bound volume)-----	6696, 21316
James L. Robertson-----	8439	decisions (separates)-----	3500
prevalent monetary policy and its		general information-----	15908
consequences, analysis-----	13997	guides against deceptive pricing-----	4726
regulation series-----	682-683,	guides for mail order insurance	
4717, 17987-988		industry-----	12411
report, 1963-----	8580	Investigation of chainstore prac-	
research library, recent acqui-		tices, authorize, hearings-----	10415
sitions-----	3974	news release-----	3887
statement for the press-----	3886	news summary-----	3501
Federal Safety Council, progress re-		nominations of John R. Reilly,	
port, 1963-----	14258	Philip Elman, hearings-----	4576
Federal Salary Systems, Advisory		opinion on joint ads, hearing-----	8457,
Panel on, see Advisory Panel		19607	
on Federal Salary Systems.		organization, procedures, rules of	
Federal Savings and loan associa-		practice, and statutes-----	4727
tions:		report, 1963--	
combined financial statements,		departmental edition-----	6695
1962, income and expenses-----	655	document edition-----	6219
conventional loans made in excess		statutes and court decisions, 1963	
of 80 percent of property ap-		supplement-----	15909
praisal-----	3366	trade regulation rules--	
investment powers broaden--		deceptive advertising and label-	
hearings-----	6346, 17870	ing--	
reports-----	4467, 6277	previously used lubricating oil--	
loans to finance land acquisition		size of tablecloths and related	
and development-----	3367	products-----	15910
rules and regulations-----	4690	deceptive use of leakproof, guar-	
insert sheets-----	12387-388, 15890-891	anteed leakproof, etc., as de-	
see also Savings and loan associa-		scriptive of dry cell batteries--	
tions.		relating to deception as to non-	
Federal Savings and Loan Insurance		prismatic instruments being	
Corporation:		prismatic binoculars-----	12412
audit report, 1963-----	19751	Federal wage hour law, see Labor	
deposits and share accounts, in-		standards.	
crease maximum coverage for		Federal Water Pollution Control	
each depositor, reports-----	4465, 10281	Administration:	
GAO audit, change to calendar year		establish--	
basis, amend act--		hearings-----	8395
hearing-----	10314	reports-----	4530, 17627
law-----	17377	Federation of South Arabia, see	
reports-----	12054, 17746	South Arabia, Federation of	
savings and loan associations, in-		Feed, see Food for livestock--Food	
sured savings and mortgage		for poultry--also names of	
activity, selected balance sheet		feeding stuffs.	
items-----	3543	Feed grains, see Grain.	
Federal service, see Civil service.		Feed mechanisms, automatic equip-	
Federal Small Business Administra-		ment for livestock and poul-	
tion, naming, hearings-----	2109	try-----	7918
Federal specifications, see Govern-		Feeders:	
ment supplies.		cattle feeding shelter, building	
Federal standards-----	687-689,	plan-----	19099
2329-31, 4722-24, 6090-91,		hog feeding unit, building plan-----	19096
12407-410, 14260, 19710-712		lock-hopper feeder, development for	
Federal stock number reference cata-		hydraulic hoisting of coal-----	7431
log-----	4725	Feeney, John J., relief-----	12176, 17217
Federal supply catalog-----	4601,		
14161, 15829-830			
cataloging manual, format and con-			
tent-----	10444		

Do not order from index; see indicated entry

Page 265



# INDEX 1964

	Entry		Entry
<b>Fees:</b>		<b>Fences, Ireland, electromechanical</b>	
attorneys for U.S. nationals' claim-		fishing and counting fence	14267
ants against Cuba, limit		used	
amount to be collected for serv-		<b>Feng Ting's Communist life philoso-</b>	20199
ices rendered—		phy	
law	21158	<b>Fenton, R. H., production and distri-</b>	
report	17837	bution of sweetgum seed in by	
day care services	4357	four N.J. stands	8654
dental, selected schedules, United		States	8756
States	1565	<b>Fergus County, Mont., geology</b>	
foreign countries for visa of U.S.		<b>Ferguson, Earl E., telemetry receiving</b>	
passports	15097	system for Alouette satellite	21783
land-grant colleges and State uni-		<b>Ferguson, Roland H.,</b>	
versities, 1963-64	14195	timber resources of—	
motor vehicle operators learners'		New Hampshire	8700
permits in D.C., increase—		West Virginia	21329
law	8226	<b>Fernald, Arthur T., surficial geology</b>	
reports	480, 6322	of central Kobuk River Valley,	
<b>Patent Office, increase—</b>		northwestern Alaska	18111
hearings	14147	<b>Fernow Experimental Forest, general</b>	
reports	376, 2073	Information	19747
United States employees, jurisdic-		<b>Ferns, see Bracken fern.</b>	
tion of district courts over		<b>Ferrara, Anthony J.,</b>	
actions to recover—		occupational wage surveys—	
law	17378	Buffalo, N.Y.	9466
report	17734	Scranton, Pa.	20440
<b>Feet, see Foot.</b>		<b>Ferrimagnetic materials, see Magnetic</b>	
<b>Fehlbeg, Erwin, numerical integra-</b>		materials.	
tion of differential equations by		<b>Ferrimagnetic resonance relations in</b>	
power series expansions	21773	magnetocrystalline anisotropy	
<b>Feinberg, Paul M., MRIR-PCM telem-</b>		in cubic crystals	15243
etry system	14856	<b>Ferris, Eleanor, shopper's guide to</b>	
<b>Feltler, Stanley A.,</b>		Ferris, E.U. grades of food	7920
mineral industry of—		<b>Ferris, Richard T., storing fruits and</b>	
New Hampshire	20490	vegetables on pallets in	
New York	1421	wholesale warehouses	4209
<b>Feldesman, William, address, Apr. 7,</b>		<b>Ferrites:</b>	
1964	9648	circuit for producing high-voltage	
<b>Feldman, Lloyd:</b>		nanosecond pulses	20309
family breadwinners, their special		cores for memory devices, USSR	
training needs	11247	study	16154
mentally retarded, their special		<b>Ferralloys, minerals yearbook</b>	
training needs	20427	chapter	20472
<b>Feldmann, Dieter, bibliography on</b>		<b>Ferrosilicop, mineral industry survey,</b>	
solid state optical and infrared		quarterly	3504
maser materials	7956	<b>Ferrous sulphate, use in manganese</b>	
<b>Feldspar, minerals yearbook chapter</b>	18664	extraction	13128
<b>Fellowships:</b>		<b>Ferrum Junior College, Ferrum, Va.,</b>	
national defense education act of		50th anniversary (address)	11963
1958—		<b>Ferry County, Wash., Bald Knob</b>	
graduate programs—		quadrangle, geology	18108
1964-65	2275	<b>Fertility, see Fecundity.</b>	
NDEA and higher education		<b>Fertilization of plants:</b>	
(periodical)	3782	agricultural fertilization, USSR	
your national defense gradu-		studies	14594
ate fellowship	10477	alfalfa, two-clone crosses, per-	
modern foreign language pro-		formance and self-pollination	
gram, 1965-66	17917	problem	5864
nursing research	9712	self- and cross-pollination of west-	
provided by National Institute of		ern white pine, comparison of	
Dental Research	9644	height growth of progeny	18065
Public Health Service grants, 1963		<b>Fertilizers:</b>	
funds	7589	and agrochemistry research, USSR	
water pollution control, research		studies	16089
and training grants—		applying to corn and potatoes,	
1963 awards	7711	USSR study	9222
1964 awards	21860	bibliography	1800
<b>Felsentregger, Theodore L., 2d-order</b>		commercial—	
solution of artificial satellite		consumption in U.S., 1962	1678
theory without air drag	20576	used on crops and pasture in	
<b>Felt:</b>		United States, 1959 estimates	16971
current industrial reports	3391, 21032	complex liquid and solid, testing	
polishing felts, provide duty-free		and prospects for utilizing	
entry for wools used in manu-		them, USSR study	18240
facturing—		compound and simple, use in light	
law	13881	sandy soils, comparative evalu-	
reports	8307, 12231	ation, USSR study	16487
<b>Feltman Research Laboratories, techni-</b>		cooperative bulk blending plants in	
cal memorandums	13369-370	upper Midwest	15879
<b>Felton, Jean S., man, medicine and</b>		disposal of poultry manure and	
work	7699	other waste	16932
<b>Felts, H. R., preparation of water</b>		effective use of granulated carbo-	
sample for carbon-14 dating	802	nated nitrophoska, USSR	
		study	10762

try

267

190

354

756

783

700

329

111

747

466

440

243

920

209

309

154

472

504

128

963

3108

4594

5864

8065

5089

9222

1800

1678

6971

8240

6487

5879

6932

0762

## Fertilizers—Continued.

	Entry
efficient use increased production at kolhoz, Estonian SSR	8885
fusion product concentration in milk effected by optimal fertilization of land	16833
manufactured, trade of United States, Western Europe, Canada and Japan, 1961-62	14392
mineral—	
and crop yields, USSR study	10917
organizing transportation in USSR	10825
principal types, agricultural effectiveness, USSR study	9294
transport, USSR studies	5069
ways of improving use, USSR study	10724
of petroleum origin, uses, USSR study	16026
organic fossils use, USSR study	16078
potato and sugar beet, USSR studies	16524
publications, price list	16826
role in creating material-technical basis of Communism, USSR study	10757
science and American farmer, TVA research and educational programs	21899
simple and compound fertilizers for grain crops, USSR study	12877
situation 1963-64	7904
TVA's national educational program, manufacture, distribution, etc., statistical summary by States and geographic areas	13492
uptake, radioisotopes uses, bibliography	15283
urea utilization for late fertilization of winter wheat, USSR study	16366
USSR campaign for greater production, translation	1143
USSR drive for greater output	2883
see also names of substances.	
Festivals, National Poetry Festival, Library of Congress, Oct. 22-24, 1962, proceedings	13093
Fetal death, see Still-birth.	
Feth, John H.:—	
ancient lake deposits, Precambrian to Pleistocene in Western States	15940
chemical composition of snow in northern Sierra Nevada, etc.	15954
sources of mineral constituents in water from granitic rocks, Sierra Nevada, Calif., and Nevada, Roza, relief	2178
Feulner, Alvin J., galleries and their use for development of shallow ground water supplies, etc.	18152
Fever ticks, see Cattle ticks.	
FG series	8151-53, 13793, 17127
FHA, see Farmers Home Administration—Federal Housing Administration.	
FHLBB, see Federal Home Loan Bank Board.	
Flarica, Pasquale, relief	294
Fiber board, see Pulpboard.	
Fiber boxes, see Boxes.	
Fiberboard, see Pulpboard.	
Fiberglass, see Glass fibers.	
Fibers:—	
bonded nonwoven fabrics, current industrial reports	21032
fibrous composites, mechanical properties	11852
man-made, broad-woven goods, average weight and width of fabrics	10055

## Fibers—Continued

	Entry
man-made, woven goods finished, 1963, current industrial reports	13758
synthetic, specific chemical groups, antifungal action, USSR study	992
textile, United States demand	44
vegetable, foreign agriculture circulars	3520
see also names of certain plants, textiles, etc.	
Fibroblasts, ribonucleic acid and collagen synthesis during connective tissue growth, USSR study	16345
Fibrosis, cystic, facts	7694
Fibrous glass, see Glass.	
Fichter, Wilbur B., buckling of Echo A-12 passive communications satellite	16687
Ficken, Roy W., relief	321, 6168, 6417
Fiction, classification, Library of Congress	18650
Fiduciary, gift, and estate tax returns, statistics of income, 1960	6840
Fiduciary relations, District of Columbia code, pt. 3, enact, report	15484
Field, William D., moths of genus Rhabdatomis Dyar	7600
Field artillery, see Artillery.	
Field crops, see Crops.	
Field facility directory	3506
Field glasses, prismatic binoculars, deception as to nonprismatic, etc., instruments, FTC trade regulation rule	12412
Field maneuver sense	103
Field manuals, see Army Department.	
Field measurement of alkalinity and pH	4805
Field seeds, supply and disappearances	7802
Fields, W. E., remarks, June 24, 1964	13041
Fife, William P., catheter for right heart and pulmonary artery implantation	8004
Fifty-cent piece, see Half dollar.	
Figge, I. E., residual static strength of titanium and stainless-steel alloys	5514
Fight against cattle fever ticks	9961
Figs, production, use, value, by States, 1962-63	15129
Filament-winding plastics, molecular structure and tensile properties	18862
Filamentary materials, filament wound construction, OTS bibliography	9853
Filaments:—	
copper, impact into aluminum targets at velocities to 16,000 ft per second	7496
uniform-stress spinning filamentary disk	20527
wound construction, OTS bibliography	9853
wound structures, plastic reinforced, military applications design	2255
Filaments (electric):—	
deterioration in electron-bombardment ion sources	11382
Files and filing (documents):—	
managing current files, operations, records management handbook	11428
managing noncurrent files, Federal records centers	7572
Filipinos, see Philippine Islands.	
Filler device for handling hot corrosive materials	30561

# INDEX 1964

Entry	Entry
Film libraries, <i>see</i> Motion pictures.	Finance—Continued
Film strips, <i>see</i> Filmstrips.	Atomic Energy Commission, report, 1964..... 21019
Films (chemical):	city finances..... 19288
fortran program for calculations and measurements from thin films..... 13277	city government, 1963, summary... 19288
Films (coatings):	code of Federal regulations..... 8574
ellipsometry in measurement of surfaces and thin films, symposium proceedings..... 21782	college and university finance series..... 573, 10458, 10475, 14185, 14195, 17911
thin films obtained by vacuum spraying, thickness monitor... 5917	combined financial statements, members of Federal Home Loan Bank System, 1962, income and expenses..... 655
trypsin and ovomucoid, mixed, force-area study..... 20710	Communist China, translations... 914, 939, 986, 1110, 1185, 1222, 2575, 2613, 2722, 2794, 2838, 2927, 4934, 4957, 4991, 5061, 5241, 5262, 5352, 5391, 6946, 6988, 7029, 7050, 7105, 7312, 8944, 9142, 10906, 12602, 12659, 12744, 12826, 13019, 14531, 14548, 14641, 16061, 16131, 16214, 16287, 16476, 16555, 18396, 18426, 18448, 18599, 19856, 19995, 20338, 20401, 21475, 21520.
Films (coverings):	consumer survey, 1963, characteristics..... 8587
shrink films for prepackaging frozen cut-up chickens, evaluation... 11772	county governments, statistics, census of governments, 1962..... 11890
Films (metallic), <i>see</i> Metallic films.	daily statement of Treasury..... 3401
Films (photography):	Defense Establishment manpower utilization in financial management functions, report..... 12079
National Bureau of Standards, list, processed records, inspection for aging blemishes..... 7578	family finances, price list..... 21842
<i>see also</i> Motion pictures.	farmers' financial calculations and physical measurements handbook..... 7911
Filmstrips, color slides and filmstrips with texts to be borrowed from National Gallery of Art..... 9640	errata..... 13579
Filmstrips:	financial assistance programs for State and local governments, institutions, etc., administered by Office of Education..... 582
captioned films for deaf, catalogs... 572, 12320	financial protection for Federal employees..... 11945
clean water is everybody's business, speaker's guide..... 13420	financial services, use at enterprises, USSR study..... 6966
colored, with texts, to be borrowed from National Gallery of Art, copyrighted—	financial statements—
Jan.-June 1963..... 6530	Panama Canal Co..... 10156
July-Dec. 1963..... 14158	Public Housing Administration... 10176
Government films for public educational use, 1963..... 17929	financing and marketing, Siamese twins (remarks)..... 17989
Library of Congress catalog..... 3678	financing undergraduate education, fiscal policy as agent in fostering economic growth (remarks)..... 13504
medicine and allied sciences, film reference guide..... 18898	flows of funds through financial intermediaries..... 12404
Filosofskiye nauki (periodical): translations..... 20077	foreign, increase for U.S. corporations operating abroad to defend U.S. gold reserves..... 11538
Filter paper, with and without pinholes, aerosol penetration... 4297	General Accounting Office findings, etc., for improving Govt. operations, 1963—
Filters and filtration:	departmental edition..... 8709
air filters, non-destructive measurement of U-235 content..... 13704	document edition..... 10173
biological filters, microflora, effect of strontium <sup>90</sup> , USSR study, carbon filter for color removal from surface waters..... 4242	government, compendium, census of governments, 1962..... 19286
coaxial low-pass filters microlab LA (FL) series, instrument calibration procedure, technical manual..... 13366	announcement and order form... 19282
cryogenic filter method produces super-pure helium and helium isotopes..... 9547	governmental—
distillate fuels filterability, effect of fuel viscosity, etc..... 5610	census of governments, 1962..... 4344
evaluation by filter methods of quality of waters injected in waterfloods..... 11332	historical statistics, census of governments, 1962..... 19287
fine-particle filter prevents damage to vacuum pumps..... 13192	announcement and order form... 19283
high-pressure gas filter has easy take-down, assembly..... 7483	in United States, 1963..... 11909, 17111
NS Savannah ventilation system filter testing..... 19252	graduate education, financing..... 14184
tin recovery from hardhead by filtration..... 20505	highway, 1921-1962..... 16849
zinc recovery from dross and scrap, <i>see also</i> Light filters—Microwave filters—Radio frequency filters.	industry, employer expenditures for selected supplementary remuneration practices..... 21670A
Finance:	Kuwait's international role, Soviet view..... 18532
agricultural review..... 15836	manufacturing corporations, quarterly report..... 3955
supplement..... 2259	
agriculture balance sheet, 1964... 20911	
aids to students, financial and other assistance through programs of Health, Education, and Welfare, guide..... 21365	
assistance in gold and silver exploration (remarks)..... 1396	

	Entry
Finance—Continued	
materials on management, listing from marketing information guide	4335
meaning of international cooperation (remarks)	20860
monetary policy and balance of payments (remarks)	2326
municipal highways, quarter century of financing, 1937-61	18928
municipalities and township governments, statistics, census of governments, 1962	15305
announcement and order form	21025
North Vietnam, financial management must be improved	7318
problems relating to Soviet trade	12882
public school finance program, 1961-62, Puerto Rico	4633
public school finance program, 1962-63	
American Samoa	4634
Canal Zone	4635
Colorado	593
District of Columbia	4636
Georgia	2280
Guam	4637
Louisiana	2281
Maine	4638
Maryland	4639
Michigan	2282
Minnesota	2283
Nebraska	17922
New Hampshire	2284
New Jersey	4640
North Carolina	4641
North Dakota	4642
Oklahoma	594
Rhode Island	595
Texas	596
Virgin Islands	4643
Wisconsin	8493
publications, price list	1551
REA financing, hearing	15578
receipts and expenditures of U.S.—combined statement, 1963	4175
monthly statement	3747
reports of I.C.C., consolidated index-digest	8836
school districts, census of governments, 1962	4344
State and local governments, 1963, employee-retirement systems	11909
State finances—	
1962	190
1963	191, 8139, 10073
1964	21036
State government, compendium—	
1962	190
1963	10073
State sovereignty and fiscal policy (address)	15905
statements of Public Housing Administration, 1963 and 1962, GAO examination	8715
statistics, Federal reserve chart book	3491
historical supplement	21312
Tennessee Valley Authority, statements, 1963	1631
Treasurer of United States financial statements, 1963, GAO examination	19753
treasury bulletin	4093
USSR, financial organs, tasks	14533
see also Accounts and accounting—	
Banks and banking—Credit—Inflation (finance)—also names of countries, etc.	
Finance Committee, Senate:	
calendar	3667
committee prints	6506, 12260-263
hearings	528-529, 6505, 10418, 14133-135, 15805-806, 17875-876

	Entry
Finance Committee, Senate—Con.	
investigation and studies, State taxation on interstate commerce activities extend time for filing reports—	
law	8255
reports	6296, 6486
reports	456, 472, 6441, 6486, 6490, 12229-243, 14049, 14055-57, 14063-65, 14068, 14073, 14098, 15700-702, 15711, 15724, 15763, 15765, 15784, 17748, 17831, 17833-834, 19556, 19565, 19568, 19578-579
summary of Senate amendments to revenue act of 1963	12264
Finance companies:	
consumer credit at consumer finance companies	3360
sales finance companies	4004
Finance officers, see Disbursing officers.	
Financial analysts, examination announcement	10113
discontinuance notice	21057
Financial procedures under Public law 480	12318
Financial statements, see Finance.	
Financial statistics, see Finance.	
Finchum, R. N., school building maintenance procedures	10470
Findlay, Robert:	
occupational wage surveys—	
Paterson-Clifton-Passaic, N.J.	16595
Pittsburgh, Pa.	11279
Findlen, H.:	
Irish cobbler and Kennebec potatoes	5836
vine killing in relation to maturity of Red River Valley potatoes	15223
Fine, Morris M., smelting prerduced iron ore pellets	20499
Fine arts, see Paintings.	
Fine Arts Commission:	
appropriations, 1965—	
hearings	6338, 8436
law	13904
reports	8288, 8420, 13951
brief history, 1910-63	17993
laws and executive orders relating to	6697
report, 1954-58	8591
Finishes and finishing:	
aluminum finish, high temperature non-reflective erosion resistant	18569
natural finish developed at Forest Products Laboratory	18059
vibration finishing of edges of punched parts, Communist Chinese study	11088
Finishing beef cattle	5826
Finite element solution for thin shells of revolution	14768
Fink, Marvin P., aerodynamic data on large semispan tilting wing with 0.6-diameter chord, etc.	7540, 18747, 20571
Finland:	
bibliography of periodicals and monograph series, 1950-62	186
Communist Party conducts secret purge	12852
economy, basic data	8826
educational data	580
Finnish editor criticized as anti-Soviet, USSR study	11029
Finnish Lapps and their diet, calcium-137 and potassium content, body and dietary	13392
Finley, Amanda H., scholarships for American Indian youth	2440



# INDEX 1964

	Entry
Finley, H. O., thermionic emission ion sources for isotopic analysis of lithium	8061
Finney, R. Gordon, Jr., relief	6399, 8258
Fins (aircraft):	
fin-plate interference model, heat transfer and pressure investigation at Mach number of 6	16679
heat transfer measurements on flat plate and attached fins at Mach nos. of 3.51 and 4.44	14873
roll controls applicable to fin-stabilized vehicles	18793
unswept and 38° swept cylindrically blunted wedge, heat transfer	18739
Fins (cooling):	
central finned-tube radiator, analysis and design procedures	20601
heat rejection and weight characteristics—	
fin-tube space radiators with tapered fins	7535
radiator fin-tube configurations	14898
heat transfer from fin-tube radiators including longitudinal heat conduction, etc.	3028
thermostatic fins-analysis, spacecraft temperature control	18717
Florida, Pasquale, relief	6145, 6407
Fir:	
broom rusts—	
effects	8675
general information	15936
Douglas—	
growth and yield records from well-stocked stands, summary	8682
harvesting for maximum income	2359
laminated bolts used in joints, performance	8674
mergers and economic concentration in lumber industry	14331
pruning to increase timber value	2361
seed, predicting insect-caused damage from samples of young cones	18072
seedlings, toxic effects of compounds leached from shingle tow	8656
stresses within curved laminated beams	8640
woodland, 13 years of thinning	8657
grand fir, insect damage to cones	8643
Shasta red, lumber yield and log values	789
supplemental treatments to aid planted Douglas-fir in dense bracken fern	12465
true firs in California, losses, etc., caused by dwarf mistletoe	21324
volume killed by spruce budworm in northern Minnesota, aerial survey	12472
white, mortality and growth reduction following defoliation by tussock moth	12478
Fire ants, <i>see</i> Ants.	
Fire control, <i>see</i> Forest fires.	
Fire control (gunnery):	
course, fire control radar technician training, trainee's guide	7638
equipment, Federal item identification guides for supply cataloging	12297
supplements	3478
radar special circuits, trainee's guide	20683
Fire control technicians:	
basic electronics, trainee's guide	20678-879
1 & C, Navy training course	20684
proficiency by use of training devices, enhancement	18852
Fire-cured tobacco, <i>see</i> Tobacco.	

	Entry
Fire damp, formation and flammability of stratified methane-air mixtures	7482
Fire Department of D.C.:	
mutual-aid agreements with adjacent communities, amend act—	
law	17332
report	15785
salaries, increase—	
law	17433
reports	15569, 17613, 17716
Fire departments, 2d and 3d class postal rates for volunteer fire companies, extend, report	15768
Fire extinguishing agents:	
flammable-liquid, new vapor-securing agent	13344
technology, bibliographies	16890
Fire-fighting apparatus:	
Federal item identification guides for supply cataloging	12291
supplements	3472
motorized, current industrial reports	8391
pumps, operating procedure	11874
Fire Insurance, District of Columbia rate regulation laws, amend hearings	10417
Fire Island National Seashore:	
establish—	
hearings	12141, 12268
law	10395
reports	15529, 15756, 17574
Fire prevention, <i>see</i> Fires.	
Fire protection, <i>see</i> Fires.	
Firearms:	
amend act to restrict interstate shipment, etc., hearings	8441
Federal firearms act, amend when necessary for national security, report	17758
Federal laws under IRS, guide for law enforcement officers	14366
mail order, interstate traffic, juvenile delinquency investigation—	
hearings	539
report	21231
Firemen (firefighters):	
District of Columbia—	
examination announcement	11935
residence restrictions, repeal—	
law	17376
reports	13976, 17717
sick leave benefits—	
law	17330
reports	6323, 15773
employment outlook	13055
mutual aid agreements, D.C. and adjacent communities, amend act—	
law	17332
report	15785
overpayments of wages made to firefighters by Forest Service—	
GAO report	8727
validate, report	15512
Texas, social security coverage—	
law	13898
reports	8308, 12232
Fireplaces, safety, literature survey	3044
Fires:	
area burned by wildfire in California watersheds, 1940-59	8666
aspects of civil defense	15346
crash fire-inerting system for reciprocating engine helicopters	7816
Federal Fire Council—	
safety training and speakers directory	6793
staff program management, related to fire safety	4772
Federal fire experience, 1962	4773
fire retardants, operational tests of 2 viscous DAP	2376

	Entry
Fires—Continued	
fireproof your family	21849
mass fires and conflagrations, study	2379
Mingus Mountain burn, vegetation changes following fire	12471
motor carrier accidents involving, 1959-62, ICC analysis	12566
only you can prevent	18963
plyon-juniper type of Arizona, effects of fire	16969
potential aircraft fuel tank vent fires caused by atmospheric electricity	7550
protection, engineering, Navy design manual, changes	3196
roadside hazard reduction with fire retardant chemicals	2378
safety and fire protection bulletin, VA	5743, 9866, 20869
safety of residential chimneys and fireplaces, literature survey	3044
space-cabin atmospheres, fire hazards	11358
see also Forest fires.	
Firms, see Business.	
Florin, Thomas W.:	
basic data on economy of—	
Aden and Federation of South Arabia	18169
Iraq	6847
Saudi Arabia	10703
Syrian Arab Republic	6856
First aid:	
flooded homes and farms	20908
measures in modern warfare, civil defense pamphlet, USSR	20001
First Ladies of White House, dresses, National Museum exhibit	1583
Fiscal accounting, see Accounts and accounting.	
Fiscal policy, see Finance.	
Fischel, Jack, flight-informational sensors, display, and space-control of X-15 airplane for atmospheric and near-space flight missions	16712
Fischer-Tropsch synthesis, iron catalysts, kinetics	13103
Fiscus, Clifford H., pelagic fur seal investigations, Alaska waters, 1962	8622
Fish, George E., jr., titanium resources of Nelson and Amherst Counties, Va., nelsonite	11335
Fish and fisheries:	
acid mine pollution in U.S. affecting fish and wildlife, extent—	
administration of Public law 480, 1963 fishery amendment, hearing	8357
Alabama landings	3248
annual summary, 1963	12420
Alaska, annual summary, 1962	8593
Alaskan problems, hearings	10330
America goes fishing	12425
anadromous fish, program for conservation, development, etc.—	
hearings	15597
report	17546
antimycin A toxicity	19721
Aral Sea, fortuitous settlement of bullheads and atherina, and their relationship with acclimatized and native species, USSR study	10804
bibliography, FL-480 translation program	11662
bionics and fishing, USSR study	10766
breeding, population dynamics, and health of fish, USSR study	11051
Bureau of Commercial Fisheries research vessel, George B. Kelez, activation	4731
California landings	3299

	Entry
Fish and fisheries—Continued	
canned fishery products, annual summaries	8596, 19715
care of tropical aquarium fishes	15919
Chesapeake fisheries, annual summaries	695, 19720
code of Federal regulations	6683
commercial fish stocks in Baltic Sea, USSR study	7171
commercial fisheries abstracts	3340
Commercial Fisheries Bureau—	
Alaska, research and services	6702
North Atlantic region, research and services	2336
commercial fisheries outlook	4734, 6714, 10565
commercial fisheries review—	
separates	3341
4729-33, 6705-11, 8601-3, 14267-273, 17999 19723-724	10558, 2338,
list	19727
commercial fishery research and development act, 1964—	
hearings	10330
Interior Dept. reports on legislation	12149
law	12004
report	10234
conservation notes	6712, 12425-426, 14274
Cuban Center of Fishery Research	12621
culture and related subjects, bibliography	19726
current fishery statistics, CFS series	691-695, 2334-35, 3248, 3299, 3508-9, 3512, 3541, 3556, 3699, 3701, 3711-12, 3720, 3728, 3785, 3791, 3798, 3814, 3983, 4035, 4042, 4081, 4133, 4162, 6698-6701, 8592-98, 10547-552, 12414-422, 14263-266, 15912-915, 17994-996, 19714-720.
detecting schools of fish, hydro-acoustical station Paltnus, USSR	12592, 15996
development of John N. Cobb, pelagic trawl, progress report—	
developments in ichthyology, USSR study	4730
diphyllobothriasis distribution in Yenisey River, USSR study	6930
effect of benthonic fauna and zooplankton on fish supplies, USSR study	9180
effects of ionizing radiation on lipids of fish	16493
fish and wildlife act, excerpt	19251
fish control investigations	2340
fish embryos, radiation, effect on synthesis of ribonucleic acid, USSR study	19721
fish passage reports—	
Bonneville, The Dalles, McNary and Ice Harbor Dams—	
1962	613
1963	17936
Rock Island Dam, 1962	21319
fish protein concentrate—	
Federal Government's research program, hearing	19597
for human consumption, production studies	8601
report (series)	10559-563
fish regulations for District of Columbia	14276
fish schools in central Pacific Ocean, 1950-61	15930
fish sticks and fish portions, firms producing	760
fisheries management and fish by-products in livestock feeding, USSR study	12833
fishery industrial research	10564

# INDEX 1964

	Entry
Fish and fisheries—Continued	
fishery leaflets	2339-40,
4734-36, 6713-17, 8604, 10565-	
567, 14276-277, 15918-921, 18000,	
19726-728.	
fishery products—	
delicatessen	2339
firms canning fish and shellfish	
specialties, list	745
firms manufacturing marine animal	
scrap, meal, oil, solubles,	
and homogenized condensed	
fish, list	754
firms manufacturing miscellaneous	
industrial fishery products,	
list	756
5 years' voluntary inspection—	8602
food for animals, from marine-	
animal products, firms canning,	
list	751
industrial, annual summary—	8597
manufactured, 1962, annual sum-	
mary	14266
wholesale dealers, list—	
Alabama	717, 734, 18017, 18024
Arkansas	733, 18023
California	721
Connecticut	705, 18006
Delaware	709, 18010
Florida	716, 19735
Georgia	715, 18016
Illinois	726, 8610, 8613
Indiana	727, 15927
Iowa	4739
Kansas	8614
Kentucky	15926
Louisiana, coastal area	719, 18019
Maine	701, 18002
Maryland	710, 18011
Massachusetts	703, 18004
Michigan	728
Minnesota	724, 4738, 8609
Mississippi	735, 18026
coastal area	718, 18018
Missouri	8615
Nebraska	18025
New Hampshire	702, 18003
New Jersey	707, 18008
New York coastal area	706, 18007
New York State	731
North Carolina	713, 18014
North Dakota	8611, 18022
Ohio	729
Oklahoma	732
Oregon	722, 18020
Pennsylvania	708, 730, 18009
Rhode Island	704, 18005
South Carolina	714, 18015
South Dakota	15928, 18028
Tennessee	8616
Texas	736, 10827, 19736
coastal area	720
Virginia	712, 18013
Washington, D.C.	711, 18012
Washington State	723, 18021
Wisconsin	725, 8612
fishery statistics, 1962	19740
fishes of our time reveal earth's	
past, hypotheses, etc., USSR	
study	7325
fishing industry, USSR general	
studies	16259
Florida landings	3512
food fishes, propagation and distri-	
bution, statistics 1961-62	18031
foreign fisheries briefs	4733,
6711, 8603, 14270	
foreign fishing vessels, prohibit	
fishing within territorial wate-	
rs of U.S.—	
hearings	8390
law	12003
report	10229

	Entry
Fish and fisheries—Continued	
formation of conditioned reflex re-	
sponse to magnetic field in	
fish	5533
freezing fish in home	1701
freshwater fish distribution, USSR	
study	4917
frozen fish, monthly report, prelim-	
inary	3540
frozen fishery products	3541
annual summary, 1963	12414
frozen glazed fish, net-weight deter-	
mination	6708
fungi, saprolegnia and relatives, of	
fish and fish eggs	6716
Galveston Biological Laboratory	
research 1963	12424
gas metabolism of cold-blooded ani-	
mals, USSR studies	7061
Georgia landings	3556
annual summary, 1963	14263
Great Lakes fisheries, annual sum-	
mary, 1962	693
Gulf fisheries, annual summary,	
1962	2335
hatchery program of Bureau of	
Sport Fisheries and Wildlife,	
weakness in administration,	
GAO report	21346
Hong Kong industry, 1962-63	6720
Indian fishing rights, hearings	19602
industrial products, 1962, annual	
summary	19716
industry, scientific studies, USSR	18296
injury from use of insecticides, etc.,	
prevent or minimize, report	10216
Iran's industry, 1962-63	6719
Ireland, electromechanical fishing	
and counting fence used	14267
Lake Erie explorations, May-Nov.	
1960	14273
Lewis and Clark Lake, Missouri	
River, 1956-62, population	
studies	12427
Louisiana landings	692, 3699, 17995
Maine herring, exploratory fish-	
ing	10571
Maine landings	3701, 10551, 12415
marine and fresh-water resources of	
U.S., authorize survey, re-	
port	17787
market news leaflets	6718-20,
19729-730	
Maryland landings	691, 3711
annual summary, 1963	15915
Massachusetts landings	3712,
14264, 15913	
Michigan landings	3720
Middle Atlantic States fisheries, an-	
ual summaries	10547, 17996
miscellaneous legislation, hear-	
ings	10330
Mississippi landings	3728
annual summary, 1963	12421
Mississippi River fisheries, annual	
summary, 1962	6698
New England, fisheries, annual	
summaries	694, 19718
New Jersey landings	3785
annual summary, 1963	17994
New York landings	3791
annual summary, 1963	15912
Norris Lake fishing	11665
North Carolina landings	3798, 12418
North Korea, establishment of sci-	
entific system on fisheries	18400
northwest Atlantic, international	
convention of 1949, protocol	10361
report	14029
Ohio landings	3814, 6699
Okefenokee National Wildlife Refe-	
uge fishes, list	19733
ophidioid fish genus Oligopus from	
West Africa, review	20656

	Entry
<b>Fish and fisheries—Continued</b>	
Oregon landings, annual summary, 1963	10549
outdoor fish cookery	17997
Pacific Coast, commercial fisheries, 1962	12426
Pacific Coast fisheries, annual summary, 1962	8595
packaged fish, producers, list	759
packaged products, annual summaries	8598, 19714
parasites of—	
freshwater fish	6716
Hawaiian Acanthuridae	7602
Passamaquoddy region, economic survey of U.S. fisheries, 1956-57	10575
pollution-caused fish kills, 1963	13414
progressive fish-culturist	3942
protection of fish from pesticides, increase authorization for research, report	12216
publications, price list	13388
radiation preservation of fishery products—	
irradiated fishery products	8087
low-level	8083
radioactive carbon absorption and secretion by fish, USSR study	8878
radioactive isotopes and fish, USSR studies	1243
recent developments in Soviet ichthyology	2590
research reports	10570, 14282, 21317
Rhode Island landings, annual summary, 1963	3983
role of lake fishes in infestation of humans with Diphyllibothrium latum in Yenisey River, USSR study	12416
Saltonstall-Kennedy act, amended, excerpts	9180
scup fishery with special reference to fluctuations in yield and their causes	4735
sea fish, effect of constant magnetic fields on conditioned reflexes	15929
serological studies of fish, use of plant extracts	3040
South Carolina, landings, annual summary, 1963	10574
Soviet industry	4042
Soviet studies on fish	12417
special scientific reports, fisheries series	1091
4740-45, 6728-29, 8617-23, 10571-577, 12427, 14283, 15929-930, 18029, 19737-739, 21318-320	5380
sport fishery abstracts	2341-43
sport fishery research, progress, 1963	4740-45, 6728-29, 8617-23, 10571-577, 12427, 14283, 15929-930, 18029, 19737-739, 21318-320
sportsman's stake in conservation, statistical digests	4047
Swedish fisheries, 1962-63	10556
taxonomic analysis, role of otoliths, USSR study	5847
Texas landings	18031, 19740
TVA, valuable natural resources	6718
United States—	
advance report	4979
annual summary, 1962	2384, 4081
preliminary review, 1963	5720
USSR—	
acclimatization of fish and invertebrates to water bodies, results and prospects	6700
developments	10550
fish-catching, fish-breeding, and pisciculture, studies	10552
industry, recent developments	1003
postwar expansion of industry	5296
Venezuela, commercial catch, foreign trade, and major developments, 1961-62	16283
	16348
	12258
	19720

	Entry
<b>Fish and fisheries—Continued</b>	
Virginia landings	4133, 19717
Washington State landings, annual summary, 1963	8594
water-resource projects, uniform policies and cost allocation—	
hearings	6361
report	6304
Wisconsin landings	4162, 12419
zoobenthos and nutrition of benthophagous fish in Lake Dalaynor, Chinese People's Republic	5001
see also Diseases of fish—Fishing—Sponges—also headings beginning Fish—also names or classes of fish.	
<b>Fish and Wildlife Service:</b>	
act of 1956, excerpt	2340
circulars	2336-37, 4728, 6702-4, 8599-8600, 10553-557, 12423-424, 15916-917, 17997-998, 19721-722
fishery bulletin	19725
pesticide-wildlife studies, review of investigations, correction	2337
press releases	3888
publications—	
physical and chemical oceanography, papers, list	18000
printed and duplicated, monthly list	3740
refuge leaflets	697-700, 4737, 6721-27, 8605-8, 10568-569, 14278-280, 15922-924, 18001, 19731-733
regulatory announcements	15925, 19734
report, 1963	14262
SL series	701-760, 4738-39, 8609-16, 15926-928, 18002-28 19735-736
special scientific reports—	
fisheries series	2341-43, 4740-45, 6728-29, 8617-23, 10571-577, 12427, 14283-15929-930, 18029, 19737-739, 21318-320
wildlife series	4746, 6730-31, 8624-25, 10578-580, 15931, 18030
Fish as food, see Fish and fisheries.	
Fish bait, see Bait.	
Fish culture, see Fish and fisheries.	
Fish hatcheries, see Fish and fisheries.	
Fish meal:	
azeotropic method of obtaining, USSR study	7246
improved rapid method for determining total lipids	19724
Peru, report, 1963	19730
production—	
annual summaries	14265, 15914
monthly reports	3508
Fish nets, monofilament gill net fishing for skipjack tuna in Hawaiian waters, 1961-62	15916
<b>Fish oil:</b>	
marine oils, prospects for foreign trade	6738
Peru, report, 1963	19730
production—	
annual summaries	14265, 15914
monthly reports	3508
Fish ponds, pond-raised carp, parasitofauna infestation, USSR study	4917
<b>Fish sticks:</b>	
and portions—	
annual summary, 1963	10548
report	3509
firms producing fish sticks and fish portions, list	760
Fisher, Frank R., foamed plastics, proceedings of conference	11657



# INDEX 1964

	Entry		Entry
Fisher, Gail F., diabetes source book.	15046	Flags:	
Fisher, H. H.:		our flag, story, etc.	4429
survey of pears, nuts, and other		Defense Dept. pamphlet	8021
fruit clones in U.S.	15196	print additional copies of House	
survey of stone fruit clones in		document, reports	6314, 8422
United States	1676	popular publications available from	
Fisher, Jack B., relief	320, 17695, 19382	Supt. of Documents	11545
Fisher, R. L., worldwide collection		State flags, reproductions	4429
and evaluation of earthquake		United States, display at Lexington, Mass., report	17516
data, final report on evaluation		Flaherty, Richard J., heat-transfer	
of 1960 seismicity	17016	and weight analysis of moving-	
Fisheries, see Fish and fisheries.		belt radiator system for waste	
Fisheries Center and Aquarium, National, see National Fisheries Center and Aquarium.		heat rejection in space	16677
Fishermen:		Flames:	
anglers' guide to sharks of Northeastern U.S., Maine to Chesapeake	10537	research and technologic work on explosives, explosions, and flames	
fishing boat owners, medical care, restore eligibility		fiscal year 1961	1403
hearings	10324	fiscal year 1962	14788
law	17283	Flammability, see Inflammable materials.	
reports	12086, 13971	Flammable gases, see Gases.	
Sakhalin, compete to increase fish catches, USSR study	7070	Flammable liquids, see Liquids.	
Fishery economy (USSR periodical): translations	16521	Flandreau Boarding School:	
Fishery products, see Fish and fisheries.		lands acquired for, hold in trust for Flandreau Santee Sioux Tribe	
Fishing, see Fish and fisheries.		law	17342
Fishing gear, see Trawls and trawling.		reports	15491, 15781
Fishing vessels:		Flandreau Santee Sioux Tribe, see Sioux Indians.	
construction assistance, extend, correct inequities in program, etc.		Flange on microwave antenna subreflector cuts ground noise	18168
hearing	14011	Flares, chromospheric, nuclear processes	14921
law	17357	Flathead project:	
reports	13956, 15506	irrigation and power systems, increase authorization	
foreign, prohibit fishing within territorial waters of U.S.		law	21132
hearings	8390	reports	12106, 15716, 19485
law	12003	Flatjacks, use in stress determination	9517
report	10229	Flatley, Thomas W., high speed vacuum performance of miniature ball bearings lubricated with combinations of barium, gold, and silver films	13232
Fishman, Moses, testimony, hearing.	2126	Flatt, W. P., energy metabolism research progress report	9919
Fission products:		Flax, Alexander H., nomination, hearings	521
airborne, North American networks employed in monitoring, intercalibration	18860	Flax, Lawrence, magnetic field from finite thin cone by use of Legendre polynomials	16708
artificial radioactive elements, chemical technology, principles	7126	Fleas:	
concentrations in milk, effect of farming practices	16833	how to control them	11764
separation by solvent extraction, final report	5983	red-tailed gerbils and their fleas, autumn-winter migration in Bozdag Mountain Ridge area, USSR study	12969
variation to content of cystoselra in Black Sea, USSR study	5028	Fleet, see Navy.	
Fissures, see Earth.		Fleet Air Western Pacific Repair Activity, military inspection representatives at civilian contractors' plants, relief	12038
FIST, see Project FIST (fault isolation by semi-automatic techniques).		Fleet Marine Force manual FMFM series	1393-94, 5459, 9486-87, 11309, 16619, 18653, 20456
Fitchville quadrangle, Conn., petrochemistry and bedrock geology	18109	Fleischer, H. O., overlays for lumber, old product in new dress	14311
Fitness for leadership	18881	Flessas, Demetrios, and wife, relief	304, 1901
Fittings (auxiliary parts):		Flexible coaxial cable	13343
Federal item identification guides for supply cataloging	12291	Flexible fastener allows thermal expansion	14831
supplements	3472	Files:	
FitzPatrick, Thos. K., rehabilitation programs and facilities of Western Europe	1651	activity of Musca domestics in relation to temperature, USSR study	2641
Fitzsimmonds, Robert S., factors affecting U.S. fruit markets in Japan	18042	black-fly larvae, migration, USSR study	12974
Fitzsimons General Hospital, Medical Research and Nutrition Laboratory reports	110, 8044-45, 19223-224	chironomid midges of California	7601
5-hydroxyindoleacetic acid, see Acetic acid.			

# JANUARY-DECEMBER

ry

20  
21  
22  
45  
29  
516  
77  
403  
738  
842  
781  
168  
921  
132  
485  
517  
232  
919  
521  
3708  
1764  
2969  
2038  
-94,  
1619,  
4311  
304,  
1901  
3343  
4831  
2641  
2974  
7601

	Entry
Flies—Continued	
controlling hibernation, USSR study	1322
culture of midges of genus Culicoides under laboratory conditions, USSR study	2555
labeling, with radioactive phosphorus, USSR study	2554
Mexican fruit fly, how we fight it—	15216
Nearctic Psychomyiidae, notes with special reference to their larvae (Trichoptera)	7609
RNA variations in giant chromosomes of Chironomus dorsalis during metamorphosis, USSR study	4980
Tabanidae, Diptera, of Florida, general information	16973
Virginia pine sawfly, life history, studies	14333
Flight:	
aerospace safety (periodical)----- assistance service-----	3217
ATS manual, changes-----	5920, 13653
handbook, change-----	15246
cruising supersonic transport, dynamic stability characteristics, pilot evaluation-----	18764
free, test results on performance of cork as thermal protection material-----	18766
information manual-----	17018
amendments-----	84,
3510, 4269, 8011,-----	13655
international-----	3606, 11811
amendments-----	4270, 15248, 20976
information publications, dates of latest editions-----	3406
instruction, Reserve Officers Training Corps members, permanent authority, report-----	15739
instructor practical test guide-----	21321
instructors, certification, Federal aviation regulations-----	650
amendments-----	10511, 17967, 19673
investigation, deflected slipstream STOL transport airplane having 4 interconnected propellers-----	9594
low-subsonic characteristics of supersonic airplane configuration with parawing as landing aid-----	1462
MATS flyer (periodical)-----	3713
Means, James, and problem of man-flight, 1882-1920-----	18944
optimal coplanar flight between orbits-----	20623
parabolic maneuvers, exclusion of angular accelerations as cause of visual illusions-----	79
pressure measurements on forward fuselage compared with wind-tunnel data and theory-----	5521
private pilot's handbook of aeronautical knowledge-----	6732
qualification of parachutes, ribless guide surface to produce low lift to drag ratios-----	5882
radio controlled dynamic spacecraft, deployment investigation of parawing recovery device-----	1466
rules, Federal aviation regulations-----	21290
safety and weather, USSR study-----	20053
semiautomatic inspection program of FAA, unnecessary costs incurred, GAO report-----	8738
sonic booms from aircraft in maneuvers-----	16691
standard flying sense-----	10005
study of bird flight, USSR-----	10977
supersonic aircraft, path and atmospheric variations effects on boom propagation-----	7562

	Entry
Flight—Continued	
test data, determination of stability derivatives by means of high speed repetitive operation analog matching-----	11786
test facilities, AFPTC handbook-----	7972
tests-----	
flow-visualization techniques-----	20858
T-39A aircraft, limited stability and control qualities-----	7969
Trallblazer rocket vehicles, results of application of wind-compensation method-----	9566
time-of-flight mass spectrometer, charge transfer studies and kinetic analysis-----	13645
time shift equations, analytic solutions-----	13637
training, air navigation, Air Force manual, change-----	4235
turbulent, urinary catecholamines-----	1742
vibration data of Aerobee 150A sounding rocket-----	14858
X-15 airplane, sensors, display and space control for atmospheric and near-space missions-----	10712
see also Aircraft.	
Flight crews:	
air carriers engaged in overseas and international operations, flight time limitations and rest requirements, civil air regulations amendment-----	8529
closing and locking compartment doors, civil air regulations, amendments-----	12305, 12370, 12375
electroencephalogram, use in selection-----	7998
weather for aircrews, manual, change-----	11792
Flight navigators, see Aviators—Instrument flying.	
Flight service stations:	
evaluation of FAA facilities-----	
hearings-----	17654
report-----	17583
FAA's modernized system-----	17017
Flight simulators:	
analog computer approach to V/STOL simulation employing variable-stability helicopter-----	5509
attitude stabilization of manned spacecraft by twin gyros and pulse-modulated reaction jets-----	20574
investigation of pilot performance during extended periods of low-altitude high-speed flight-----	14776
performance measurements studies-----	14790
piloted motion, investigation of VTOL height-control requirements-----	18777
piloted simulator study of loss of altitude by jet transport in go-around from instrument-landing approach-----	1471
study of human performance during low-altitude, high-speed flight-----	7817
visual presentation, point light source technique, device 2FH4-----	11494
Flight Standards Service, releases-----	3511
Flinn, Robert H., silicosis in metal mining industry-----	15066
Flint, Helen M., planning for retirement, university-labor union program-----	9888
Flint, Oliver S., Jr., Nearctic Psychomyiidae with special reference to their larvae-----	7609
Flint, Mich., water resources of area-----	4801
Flint Hills, Kansas and Oklahoma, bluestem and Osage pasture report-----	16881

# INDEX 1964

Entry	Entry
Flitters, N. E., design and operation of bioclimatic cabinet for simulating variable temperature, humidity, and light conditions. 19051	Florida:
Flood control, <i>see</i> Floods—also names of certain rivers.	annual survey of manufactures, 1962, statistics for States, standard metropolitan statistical areas, and large industrial counties 6029
Floodlights, trap for capturing black-birds and starlings at roosts. 6731	central and southern, water-control project spillway structure, model investigation 642
Floods:	climatic summary, 1951-60, decennial census 19017
Columbia River, flood season flow near the Dallas. 4058	climatological data 3329
control—	Coast Guard, inspection report 14012
flood-routing methods and unsteady flow in channels, bibliography and discussion 18140	eastern, coastal warning facilities chart, 1964 5756
miscellaneous bills, hearing 21211	electric rate book 665, 15894
damage prevention, indexed bibliography 1632	export trade potential (address) 8179
disasters, Federal financial assistance to victims, authorize study, report 461	fishery products, wholesale dealers, lists 716, 19735
flood plain type of natural tularemia focus, structure, USSR study 1242	fresh grapefruit, competitive practices in marketing 33
floods of 1956 (series) 4803	home buying opportunities \$7,000-\$15,000 657
floods of 1957 (series) 2429, 8778	labor organizations, reporting, register 16571
floods of 1958 (series) 2430-31	landings, fish and shellfish 3512
floods of 1959 (series) 12525, 15962	mineral industry, minerals yearbook chapter 1409
homes and farms, first aid 20908	municipal waste facilities, 1962 inventory 3104
hydrology (series) 12515	municipal water facilities 18909
Louisiana and adjacent States, Apr.-May, 1958. 2430	oranges, forecasting quality and pounds-solids 9911
Montana, damage, hearing 19521	pecan production, economic aspects, phosphate rock slime, electro-dewatering tests 13127
New England, historical floods, occurrence, Southwest, factors affecting 12515	phosphates, application of statistical analysis in evaluating data 20502
Ohio and adjacent States, Jan.-Feb. 1959. 12525	precipitation data, hourly 3578
Piedmont streams, frequency related to channel geometry 10642	Tabanidae, Diptera, general information 16973
prevention, and watershed protection, economic guide 11611	Florida East Coast Ry., emergency board report 6593
southeastern Kentucky and adjacent areas, Jan.-Feb. 1957. 8778	Florists, retail, bibliography 16857
southern Idaho and northeastern Nevada, Feb. 1962. 18118	Floroff, Moni P., relief 15437, 17228, 17684
Tennessee River basin, Mar. 1963. 9856	Flory, John A.: characteristics of big city industries 13661
United States—	pertinent characteristics of disposable cup industry as related to area redevelopment 11825
magnitude and frequency—	Flotation:
Cumberland and Tennessee River basins 4816	anionic, silica from iron ores, western Mesabi and Menominee Range 9516
lower Mississippi River basin. 4817	artificial magnetite concentrates, experimental upgrading 7433
Maine to Connecticut. 21359	barite-fluorspar ore from Tennessee, beryl, from spodumene mill tailing, Foote Mineral Co., Kings Mountain, N.C. 14748
New Mexico. 18116	calcareous scheelite ores 9503
Pacific slope basins in Oregon and lower Columbia River basin 4818	collectors for slimed lead minerals, polyethoxylated amines effectiveness 9509
Pacific slope basins, Wash. 10658	continuous, bertrandite and phenacite from Mount Wheeler beryllium ores 9504
Snake River basin. 6822	treatment of iron ore tailing from Champion mine, Marquette Range, Mich. 20508
south Atlantic slope basins, James River to Savannah River 12521	Flounders:
upper Columbia River basin, Wash 10658	industry, New Bedford, Mass., technical study 17028
Wyoming 6800	Pacific, application of radiation-pasteurization processes 19250
1956, summary 4803	Flour, U.S. exports under Government programs, 1962-64 14290
1957, summary 2429	Flour beetles, <i>see</i> Beetles.
1958, summary 2431	Flour mills, products, current industrial reports 3390, 13755
1959, summary 15962	
watershed protection and flood prevention act—	
amend to authorize utility relocation costs, report 6489	
amend to increase capacity of flood-detention structures—	
hearing 12114	
report 10238	
<i>see also</i> names of rivers, etc.	
Floor coverings, installers, employment outlook 7384	
Floors and flooring, portable flooring protects finished surfaces, etc. 9556	
Flora, <i>see</i> Plants.	

	Entry
Flow :	
air—	
into partially-cased snow trench.....	19650
isothermal, through snow of variable permeability.....	19649A
boiling, photographic study.....	8063
boundary-layer, free-convection, stability.....	3032
equilibrium sonic-flow method for evaluating electric-arc air-heater performance.....	9574
evaluation in arc-heated hypersonic wind tunnel.....	14877
flow and heat transfer between heated plates of finite length in free-molecule flow environment.....	21766
fluid—	
amplification of jet attachment distance as function of adjacent wall offset and angle.....	5628
electrically conductive, in plane magnetohydrodynamic channel.....	20630
movement in earth materials (series).....	4789
free-molecule—	
flux patterns resulting, through converging and diverging slots, in converging and diverging tubes and slots, numerical solutions.....	13244
gas, spiral motion between cylinders in presence of magnetic field.....	20626
hypersonic—	
conical flow parameters for air in thermodynamic equilibrium, approximate calculation.....	7504
fields about cylinders, parametric study.....	14875
induced pressures and shock shapes on blunt cones.....	9584
magnetohydrodynamics with or without blunt body.....	16656
shock-heated, parameters as function of flight velocity and altitude.....	14900
Knudsen flow entering circular tube through orifice.....	7521
laminar—	
and turbulent boundary layer around 2-dimensional and axisymmetric bodies with suction or blowing, calculation.....	21910
and turbulent, hydrogen over parallel tungsten plates.....	18763
instability problem due to heating para-hydrogen in long, slender tubes, steady-state analysis.....	7507
laminar slip—	
heat transfer in parallel-plate channel or round tube with uniform wall heating.....	16704
heat transfer of rarefied gas between parallel plates with unsymmetrical wall heat flux.....	16719
rarefied gas in parallel-plate channel etc., with uniform wall temperature heat transfer characteristics.....	21770
mixing coaxial streams of dissimilar fluids including energy-generation terms, analysis.....	9572
oblique-shock, ideal-gas tables for parameters in air.....	9592
one-dimensional, total enthalpy with various gases.....	7549
properties about blunt bodies moving at supersonic speeds in equilibrium gas, numerical analysis.....	16725
properties of thermally perfect carbon dioxide and nitrogen mixtures, tables.....	11361

	Entry
Flow—Continued	
rates from cylindrical tubes in free-molecule and slip flows, and efflux patterns, measurements.....	20606
resistance and sediment transport, Rio Grande near Bernalillo, N. Mex.....	10648
river ice and shifts, USSR studies.....	18288
shock-initiated, charts for analysis of isentropic 1-dimensional expansions in equilibrium real air.....	11420
studies of flow in alluvial channels (series).....	4799, 10648
subcooled water under conditions of zero gravity, instability effect on 2-phase heat transfer.....	21771
supersonic—	
around right circular cones—	
small angle of attack, tables.....	14796
zero angle of attack, tables.....	11360
zero yaw in air as perfect gas, correlation graphs.....	14872
nonequilibrium, past wedges and cones, application of integral relations, method.....	18794
perfect gas over bodies of revolution at small angles of yaw.....	16702
2-dimensional and axisymmetric nonequilibrium flow, theoretical studies.....	13250
theoretical performance of electrostatic thrusters with analytic space-charge flows.....	9617
through nozzle, calculations.....	13250
transverse gas, breakup of liquid jet in.....	18755
turbulence in ground-water flow.....	6805
turbulent air-bromine coaxial-flow experiment, correlation.....	7524
turbulent boundary layer, effects of transpiration through angled slots on development.....	21909
vapor condensing at high velocities in small straight tubes, heat transfer studies.....	21736
vibrational-nonequilibrium, of nitrogen in hypersonic nozzles, errata.....	14837
viscous effects on balanced jets in ground proximity.....	1636
visualization techniques used in full-scale flight tests.....	20858
Flow of water, see Hydraulics.	
Flow-through porous electrodes for redox couples.....	7664
Flowers, Robbie L., soil survey, Fayette County, Tenn.....	16867
Flowers :	
insects, control.....	19063
national flower or floral emblem, designating, bearing.....	14005
stock, treated with benzylaminopurine, quality and respiration rates.....	13560
Flowmeters :	
catheter-tip, for measurement of coronary arterial blood flow.....	17011
for measuring ground water seepage from road cuts.....	10589
meter accurately measures flow of low-conductivity fluids.....	13174
Flows through financial intermediaries.....	12404
Flue-cured tobacco, see Tobacco.	
Fluhr, P. R., four-frequency master radar console.....	5590
Fluid amplifiers :	
state of the art—	
bibliography.....	21726
research and development, fluid amplifiers and logic.....	21725



# INDEX 1964

Entry	Entry
Fluid bed processes, <i>see</i> Fluidization.	Flutter (aircraft):
Fluid flow, <i>see</i> Flow.	camber, characteristics of mono-
Fluid movement in earth materials	coque and multiweb wings..... 1482
(series)..... 4789, 19785	curved and flat sandwich panels
Fluid-pressure meter can be calibrated	subjected to supersonic flow..... 11388
without removal from flow line..... 9559	delta-planform surfaces, effects of
Fluidization:	leading edge sweep at Mach
chlorination of titaniferous slags	number of 15.4..... 14888
and ores..... 1436	panels—
zone, use with pilot-scale fluidized-	corrugation-stiffened, results at
coal feeder..... 16638	Mach number of 3..... 11414
Fluidized-bed coating with plastics,	effects of differential pressure,
technology and potential for	thermal stress, and buckling..... 3022
military applications..... 6551	research..... 1479, 14788
Fluids:	predicting flutter and divergence of
caloric cost and fluid and electrolytic	unswept wings of finite span..... 3024
balance in simulated subarctic	propeller whirl flutter of power
survival situations..... 19140	plant on flexible wing, investi-
conductive—	gation..... 18744
flow in plane magnetohydro-	requirements, civil air regulations
dynamic channel..... 20630	amendment..... 19667
movement in plane channel, prob-	sweptback T-tail of large multijet
lems concerning..... 20629	cargo airplane..... 9583
confined, behavior when subjected	wing-store configuration, effect of
to nonuniform source and wall	store pitch flexibility..... 20605
heating..... 1476	wings, modified strip analysis, sub-
low-conductivity, meter accurately	sonic kernel function, and ex-
measures flow..... 13174	periment, comparisons of char-
multiphase, in porous media,	acteristics obtained..... 13231
theories pertinent to hydrologic	Fluvial sediment in Kiowa Creek
studies..... 4789	basin, Colo..... 21364
non-Newtonian, viscous, similar	Flux:
solutions of boundary layer	ceramic, in welding some alloys..... 20167
equations for flows..... 11396	electroslag welding, USSR study..... 12726
errata..... 14849	particle, patterns resulting from
Flukes, index catalogue, Trematoda	free-molecule flow through
and trematode diseases..... 7898	converging and diverging slots.
Fluorescence, acridine dyes, deter-	solder flux leaves corrosion-resistant
mination of degree of spiraliza-	coating on metal..... 20564
tion of transport RNA..... 2889	use in soldering aluminum, litera-
Fluorescent lamps, <i>see</i> Electric lamps.	ture research..... 8070
Fluoridation:	Flux (neutron), <i>see</i> Neutrons.
annual census report, national,	Fly, <i>see</i> Flies.
State and community experi-	Flyer, Ell S., prediction by career
ence 1963..... 15042	field of airman performance..... 11802
school dental care in community	Flying, <i>see</i> Flight—Instrument flying.
with controlled fluoridation..... 11576	Flying Tiger Line, Inc., accident..... 6058
Fluorides:	Flynn, Gordon, improved handling
fused coatings as solid lubricants	of dairy products in retail food
in liquid sodium, hydrogen,	stores..... 16957
vacuum, and air..... 16686	FMC SP series..... 661,
melts, direct electrolysis of uran-	4701, 6638-39, 5551 10522, 12390,
ium dioxide to uranium metal	19687, 21298-302.
in..... 11340	FNMA, <i>see</i> Federal National Mortgage
<i>see also</i> names of fluorides.	Association.
Fluorine:	Foam:
chemical displacements in spectra	elastic-rigid, shock-wave attenua-
of magnetic resonance on nuclei	tion..... 5893
of F <sup>19</sup> fluorophosphates and	rigid foam for mines..... 7445
fluorophosphonates, USSR	vapor-securing agent for flammable-
study..... 20205	liquid fire extinguishment..... 13344
compounds partially fluorinated ad-	Foamed plastics, <i>see</i> Plastics.
ditives effect on wettability	Focus on clean water..... 13397
of solid polymers..... 5601	Focus on research, a look into wood
irradiation, and tumors, USSR	utilization research activities
study..... 18581	of Forest Service..... 7939
liquid—	Fodder, <i>see</i> Food for livestock.
cryogenic solutions and solubil-	Fog, project fog drops, warm proper-
ities..... 14850	ties and modification concepts. 14785
friction, wear, and dynamic seal	Fog signals:
studies..... 18779	Naval Oceanographic Office list—
Fluorocompounds, dyes, medicinals,	Baltic Sea with Kattegat, etc., 13312,
and toxic substances, USSR	16781, 21817
study..... 927	British Isles, etc., 11478, 14992, 21815
Fluoroscopy, use in inspection of thick	Europe and Africa, west coasts,
polyethylene sections..... 13369	etc., 5578, 16780, 21814
Fluorspar:	North American, east coast,
floatation of barite-fluorspar ore	etc., 1523, 18310, 20674
from Tennessee..... 16641	North America, west coast, etc., 3074,
mineral industry survey, quarterly..... 3514	13311, 18845
minerals yearbook chapter..... 20473	Norway, etc., 11479, 21816
production, 1963..... 16623	Pacific Ocean, western, etc., 9674,
preliminary report..... 5471	16779, 21813
	Folls, <i>see</i> Aluminum foll—Metal
	folls—Sapphire.

	Entry
Folkman, William S., levels and sources of forest fire prevention knowledge of California hunters-----	8690
Folley, John D., Jr.: development of improved method of task analysis, etc-----	18853
guidelines for task analysis-----	18854
Fonseca, Elisabete M., relief-----	8273
12204, 13858	
Fontana, Anthony, flight investigation of solar orientation control system for spacecraft-----	5506
Food:	
additives-----	
analysis of residual hydrocyanic acid-----	763
double isotope derivative dilution analysis-----	5974
transitional provisions amendment of 1964-----	
law-----	19433
reports-----	17548, 17610, 19570
Army adviser, technical manual-----	15272
bibliography, PL-480 translation program-----	11662
buying guide for type A school lunches-----	9959
chain relationship of iodine-131 following 2 nuclear tests in Nevada for Project Sedan-----	123
code of Federal regulations-----	12401
Communist China, translations-----	16295
16423, 18208, 18399, 18474, 19941, 20155, 20177, 20395, 21467, 21526	
composition of foods, raw, processed, prepared-----	9930
consumer information, price list-----	21842
consumption of selected items in U.S. households-----	5649
days' supply in warehouses, 1963, civil defense study-----	85
distribution changes and CPI-----	7419
East European Industries, translations-----	896
944, 1010, 1045, 1066, 1137, 1210, 2536, 2551, 2564, 2693, 2879, 4919, 4944, 5124, 5185, 5213, 5227, 5318, 5395, 7084, 7099, 7115, 7136, 7214, 7240, 7304, 8873, 8960, 9057, 9086, 9241, 9313, 9358, 10721, 10773, 10830, 10857, 10873, 10897, 10923, 11048, 11059, 11074, 11146, 11157, 11217, 12599, 12620, 12673, 12693, 12714, 12749, 12766, 12793, 12814, 12831, 12871, 12894, 12915, 12947, 13006, 14439, 14459, 14501, 14559, 15589, 14611, 14625, 16040, 16058, 16098, 16227, 16321, 16350, 16378, 16403, 16528, 16550, 18195, 18247, 18272, 18299, 18328, 18352, 18427, 18463, 18493, 18510, 18537, 19879, 19980, 20074, 20178, 20192, 20328, 20349, 20361, 21386, 21417, 21512, 21531, 21563, 21572, 21581, 21616, 21627	
examination for enteropathogenic and indicator bacteria, manual-----	13396
F.D.C. regs-----	4749
facts and fallacies-----	8626
fallout in food chains, HASL contributions to study-----	15282
family-----	
budget costs, intercity differences-----	2970
budgeting for good meals and good nutrition-----	4204

	Entry
Food--Continued	
family--continued	
dinner service specialist, suggested training program-----	15845
stockpile for survival-----	16953
food and related products, regulation by State governments, report-----	358
food balances, 1959-61-----	
Far East and Oceania-----	17909
Western Europe-----	17908
Western Hemisphere-----	17907
food-borne disease investigation, analysis of field data, training lesson-----	16835
food costs, farm price, information relating to agriculture compilation-----	10284, 15582
food, drug and cosmetic act--amend--	
hearing-----	12147
law-----	19433
reports-----	13981, 15547, 17548, 17610, 19570
enforcement and compliance, FDA report, monthly-----	3463
notices of judgment-----	3803
requirements guide for foreign manufacturers, etc-----	18037
text and enforcement regulations-----	762
revised pages-----	14287
food for fitness, daily guide-----	7925
food for peace-----	
activities under Public law 480-----	13923, 19452
helps feed 92 million hungry people-----	16968
moral responsibility to combat hunger and starvation in other lands (remarks)-----	7942
newsletter about activities under PL 480-----	3515
role of our abundance in assisting developing nations (address)-----	7943
food preservation and storage (address)-----	11747
homemakers' estimates of how long food on hand could be made to last, civil defense study-----	15215
import detentions, report-----	3968
industry, civil defense, management guide-----	20
inventory of food products in warehouses, 1962, civil defense study-----	5833
irradiated diet of mice, harmful effects-----	110
marketing, chainstore practices, authorize, FCC investigation, hearings-----	10415
marketing study-----	
hearings-----	10416, 13987
print additional copies, reports-----	15761-762
law-----	13902
reports-----	10272, 10406, 12063
microflora of gamma-irradiated products, USSR study-----	10807
national food situation-----	8765
nutritive value-----	19077
plentiful food, PF-series-----	3852
policy and food law (address)-----	5827
preparation and serving equipment, Federal item identification guides for supply cataloging-----	12296
supplements-----	3477
processing and handling equipment, market in Austria-----	12560
products sale structure, changes, USSR study-----	1058
protection, research grants, 1964-----	21566

# INDEX 1964

Entry	Entry
Food—Continued	Food for Livestock—Continued
radiation pasteurization program,	milk cows, roughage fed, winter
3d annual contractors meeting,	feeding season, 1963-64..... 13485
1963..... 11868	operating costs in packing mixed
retail prices by cities..... 3976	feeds with emphasis on labor
Rumanian industry, development	and capital..... 9953
under 6-year plan, 1959-65..... 5190	preparation and preservation of
shopper's guide to U.S. grades..... 7920	fodder, USSR studies..... 5152
shopping, publications, list..... 15038	production, 1962..... 13757
strontium-90—	sale by CCC for maintenance of
content, changes after cooking,	foundation herds, establish
USSR study..... 10759	penalties for misuse, etc., law.. 19393
in feeds at intermediate stages	sold in emergency areas, facilitate
of preparation for canning	pricing, establish penalties for
and freezing..... 20770	misuse, etc., report..... 15566
supplies available by counties in	Food for Peace Council, see American
case of national emergency..... 17902	Food for Peace Council.
weight and food..... 19078	Food for poultry:
wholesale food-distribution facili-	medicated feeds, pre-slaughter with-
ties Baton Rouge, La., status	drawal rules for poultrymen,
report..... 11737	poultry and egg producers..... 6737
worktime required to buy food..... 21679	production, 1962..... 13757
world food budget, 1970..... 19623	Food Marketing, National Commis-
world needs, future, man, land &	sion on, see National Commis-
food..... 567	sion on Food Marketing.
young child, education of tropical	Food poisoning:
mother in feeding..... 10080	enteropathogenic and indicator bac-
see also Canned food—Dried	teria, examination for, manu-
foods—also names of foods.	al..... 13396
Food and Agriculture Organization of	you can prevent foodborne illness.. 7712
United Nations:	Food processing:
organization, work and U.S. partici-	freeze-drying cost projections..... 4210
pation..... 19744	plant feasibility, economic studies,
United States report to FAO on	bibliography..... 14236
progress made toward purpose	radiochemistry techniques, applica-
of organization..... 14293	tion in removal of pesticide
Food and Drug Administration:	residues from foods..... 19243
consumer information materials,	sweeteners used by U.S. indus-
list..... 6735	tries..... 4613
drug policies, interagency coordina-	techniques, Eastern Experiment
tion, hearings..... 8445, 19598	Station Collaborators' Confer-
F.D.C. regs..... 4749	ence, proceedings..... 7902
fakes and swindles in health, cata-	vegetable processing plant in Jack-
log..... 19743	son County, Fla., feasibility..... 5924
FDA publications..... 6734,	Food processing machinery, market in
14286, 18037, 19743	Austria..... 12360
FDA report on enforcement and	Food service facilities, see Restau-
compliance, monthly..... 3463	rants, lunchrooms, etc.
leaflets..... 6735, 8626	Food service managers, supervisors,
organization charts..... 18041	lead foreman, examination an-
program, problems, resources..... 12145	nouncement..... 11955
scientific information system, inte-	Food service workers, supervised, sug-
grated agency-wide, feasibility	gested training program..... 15858
of establishing..... 18038	Food stamps:
veterinarians and FDA, guardians	act of 1964—
of animal health..... 14286	hearings..... 14124
Food and Drug Building, Baltimore,	law..... 17384
Md., dedication..... 18036	reports..... 8286, 8303, 14074
Food and drug officer, Food and Drug	pilot program, impact on retail food
Administration, examination	store sales in Avoyelles Parish,
announcement..... 13803	La..... 12309
Food, drug, and cosmetic act, see Cos-	Food stores, see Stores.
metics—Drugs—Food.	Foot, care for diabetic patient..... 11556
Food for animals, firms canning, from	Foot-and-mouth disease, foreign threat
marine-animal products, list..... 751	to U.S. livestock..... 4217
Food for fish:	Football:
benthophagous fish in Lake Dalay-	mouth protectors—
nor..... 5001	acceptability by high school
trout feeds and feeding..... 4728	players..... 7687
correction..... 12423	players, play it safe..... 16841
Food for livestock:	players, your best defense..... 16848
consumption of feed, 1940-59..... 5856	Foots, Mineral Co., continuous flota-
dairy cattle—	tion of beryl from spodumene
concentrate rations fed, 1963.. 11649	mill tailing..... 14748
feeding practices, preliminary	Foothills Parkway:
survey..... 9720	transfer lands from Cherokee Na-
roughage fed to milk cows, 1963	tional Forest—
summer feeding season..... 3163	law..... 17274
feed market news, weekly..... 3502	reports..... 503, 15516
feed relationships, 1909-63..... 40	Footlight (periodical)..... 3516
feed situation..... 3503	Footwear, see Boots and shoes.
finishing beef cattle..... 5826	
grain and feed statistics, supple-	
ment, 1963..... 7946	

# JANUARY-DECEMBER

	Entry
For commanders, this changing world	91-92, 1758, 3517, 4276-77, 5934-37, 8022, 9997-99, 11831-832, 13667, 15258-260, 17031-32, 19199, 20984-985.
Forage plants:	
and cattle management in longleaf-slash pine forests	13583
deer browse resources of north Georgia	8697
geobotanical maps and principles involved in making them, USSR study	2774
wheat pasture, monthly	4156
Foraminifera:	
northern Olympic Peninsula, Wash	8766
planktonic, from deep-sea cores off Eniwetok Atoll	15945
recent, off Central America (series)	14342
small, late Tertiary, southern Okinawa	10645
Force and energy:	
energy attenuation from shallow earthquake foci, USSR study	6904
forces on sphere accelerating in viscous fluid	15865
longitudinal forces response, spring-mass representation of free-free nonuniform bar	18749
sources and energy, armament elements, AMC engineering design handbook	20989
torque-producing forces acting on satellites, observations	16723
Force-area study of mixed films of trypsin and ovomucoid	20710
Force-test investigation of 1/4-scale model of modified VZ-2 aircraft	16699
Ford, Frederick W.:	
addresses:	
Dec. 6, 1963	2309
Feb. 18, 1964	6623
June 18, 1964	14233
Oct. 19, 1964	21294
Ford Motor Co.:	
Rawsonville, Mich., raising of President Johnson's E pennant for export (remarks)	21098
tractors, distributors franchises, termination, hearing	17891
Ford's Theatre National Historic Site, restoration, historic structures report	7614
Forecasts:	
hydrodynamic forecasting of pressure fields in mid-level of atmosphere for entire sphere of earth considering orography, USSR study	6884
population forecasting methods, statistical, of annual seismicity of Kuril-Kamchatka and California zones for 1 to 5 years in advance	20776
see also Weather forecasts.	10913
Foreclosures of mortgages, see Mortgages.	
Foreign affairs, see International relations.	
Foreign Affairs Committee, House:	
activities, Jan. 9-Dec. 30, 1963	12131
calendar	3648
committee prints	2111
4495-96, 6354, 8377, 10312-313, 12130, 12132.	
hearings	399, 2112, 4497, 6353, 6355, 8378-82, 10310-311, 12128, 14000, 17647
investigations and studies, U.S. foreign policy, expenses, report	4472

	Entry
Foreign Affairs Committee, House—	
Continued	
reports	333-334, 6271, 6281, 6332-33, 10228, 12067-68, 13964-969, 15554, 17474, 17519-520, 17535, 17538
Foreign affairs outline (series)	11623, 18957, 21880
Foreign agents:	
registration act—	
administration—	
report, 1962	1356
report, 1963	11243
amend—	
hearings	2237
report	6468
Foreign Agricultural Service:	
appropriations, 1965, Agriculture Dept., hearings	10286
biographic register	1595
miscellaneous, FAS-M series	766, 2347-48, 8627, 10583, 12429-430, 14289-292, 18042, 19744, 21323
Foreign agricultural trade, see Agricultural products.	
Foreign agricultural trade of United States	3518
Foreign agriculture, see Agriculture.	
Foreign agriculture circulars	3520
Foreign aid:	
appropriations, 1965, budget amendment	8257
civic action, military role in nation building	4277
community development review—	2463
controversy and reality (remarks)	4869
counterpart funds and AID foreign currency accounts	3384
deficiencies related to inadequate administration of military budget support funds provided to certain foreign countries, GAO report	19761
development research digest	14396
economic aid program in Panama, staff survey team report	10313
economic assistance, United Arab Republic	12316
economic cooperation, Ryukyu Islands, agreement with Japan	16880
economic development projects for assistance to Central Treaty Organization Agency for International Development, State Dept., GAO report on examination	8712
economic, technical and related assistance, agreement with Jamaica	3152
financing assistance under alliance for progress, agreement with Pan American Union	9825
foreign assistance act of 1961, Humphrey amendment, implementation, report, print as Senate document, report	8425
foreign assistance act of 1963—	
analysis	2111
law	1934
report	384
foreign assistance act of 1964—	
analysis	12130
hearings	8379, 10310, 12128, 14136
law	21125
reports	12068, 12075, 15676, 19489, 21197
foreign assistance appropriations, 1964—	
hearings	2229
law	1985
reports	2069, 2098-99, 2103, 2220, 12045

Do not order from index; see indicated entry

Page 281



# INDEX-1964

	Entry
Foreign aid—Continued	
foreign assistance appropriations, 1965—	
hearings	19588
law	21126
reports	13950, 13952, 19582
foreign operations appropriations, 1965, hearings	12117
French, to underdeveloped countries, wasted or productive?	11022
Ghana students in U.S. oppose aid to Nkhrumah	6518
Humphrey amendment to foreign assistance act of 1961—	
implementation report, 1963	10355
implementation report, 1964	21219
print as Senate document, report	19574
Laos, United States contribution for supervision and control—	
hearings	8380
law	17327
reports	13967, 15564
Middle Eastern and African countries, report of study, print additional copies, report	15682, 17512
mutual defense and assistance programs, appropriations, amendment	10193
mutual defense and development, proposed, 1965 summary presentation	8834
operations report	3823
program, 1964, background material	4495
program, 1965, background material	8377
recommendations, message from the President	8252
technical cooperation agreement with—	
Afghanistan	9809
Brazil	9822-23
Somali Republic	7793
United Kingdom, program in British Guiana	18972
trade and aid in troubled world (remarks)	1724
Vietnam—	
additional amount, message from the President	10195
amended request, message from the President	12563
voluntary—	
programs, reports of American registered agencies	10711, 18188
errata	21375
register of agencies	10710
Foreign assets control regulations	13500
commodity supplement	13501
Foreign assistance, <i>see</i> Foreign aid.	
Foreign Claims Settlement Commission:	
appropriations, 1964—	
hearings	515
law	1974
reports	511, 2082
appropriations, 1965—	
hearings	10288
law	17386
reports	10245, 21193, 21233
index—digest of decisions, Bulgaria, Czechoslovakia, Hungary, Italy, Panama, Rumania, Soviet Union, Yugoslavia, 1949-62	19745
report, semiannual, Dec. 31, 1962	10584
Foreign commerce, <i>see</i> Commerce.	
Foreign consular offices in U.S., 1964	7749
errata	11615
Foreign countries:	
designation used in compiling U.S. foreign trade statistics, code classification	4353
change	8109

	Entry
Foreign countries—Continued	
developing countries, cost-of-living indexes, computation	21670
employment opportunities in binational centers abroad	20864
foreign assets control regulations—	
commodity supplement	13500
heads of foreign states and other officials, provide authority to protect—	
hearing	10327
law	17352
reports	10231, 14108
institutions of higher education, decree on acceptance of diplomas issued, Hungary	7251
international law of sovereign immunity, study	11625
national of world: status, official nomenclature, etc., State Dept. geographical bulletin	9797
overseas living, guide for personnel, Army pamphlet	13676
passenger travel to and from U.S.	3970, 4829, 12537
plant quarantine import requirements for oak logs and lumber, addition	16938
ports, code classification by geographic area, etc., schedule K, profiles of newly independent states	6049, 18566
social security programs, 1964	15088
statistical publications, accession list	3525
underdeveloped, Soviet and Communist Chinese policy towards, list of publications	9783
visa of U.S. passports, fees charged, lists	7760, 15097
women in high-level elective and appointive positions in national governments	5765
<i>see also</i> Foreign agents—Foreign aid—also subject involved.	
Foreign crops and markets (periodical)	3510
Foreign currencies, <i>see</i> Foreign exchange—Money.	
Foreign developments in machine translations and information processing	949, 1018, 1059, 1139, 2578, 2710, 2733, 2852, 2915, 6921, 6981, 8014, 9093, 9125, 11056, 11127, 10000, 10147, 10527, 18512, 20109.
Foreign exchange:	
gold reserves, current situation and long-term trends	14175
rates—	
monthly release	3521
weekly release	3522
regulations governing operations	5729, 19003
Treasury and Federal Reserve operations	8588, 17990
Foreign fisheries briefs	4733, 14270
Foreign Labor Conditions Division, BLS, program and publications	18645
Foreign languages, <i>see</i> Language and languages.	
Foreign policy, <i>see</i> International relations.	
Foreign relations, <i>see</i> International relations.	
Foreign Relations Committee, Senate:	
calendar	3668
committee prints	4582, 12265, 14137
hearings	530, 2237, 4580-81, 6507, 10419, 14136
investigations and studies, U.S. foreign policy, extension, reports	4644, 6442

	Entry
Foreign Relations Committee Senate—Continued	
reports.....	423-424.
514, 2183-84, 2196, 2213, 2210-	
18, 2226, 4344, 4531, 4566, 6468,	
6473-74, 10362-306, 12245,	
14029-30, 14102, 14108, 15615,	
15659, 15676, 15708-710, 15759,	
15770, 17729, 17709-800, 17837,	
21235	
Foreign Scholarships, Board of, see	
Board of Foreign Scholarships.	
Foreign Service:	
annuities, adjustments—	
hearings.....	10811
reports.....	2226, 13968, 19463
biographic register.....	1595
building act, 1926, amend—	
law.....	17273
reports.....	13969, 15710
department and foreign service	
series.....	1505,
7748-49, 9778, 11615, 15095,	
16869, 20811.	
list.....	3524
officer examination, sample ques-	
tions.....	7748
officers, keys, of foreign posts, guide	
for businessmen.....	9801
USIA, career opportunities for	
young people.....	3179
see also Consuls.	
Foreign Service Institute:	
basic courses—	
Amharic language.....	15094
Hungarian.....	13464
Lingala.....	1601
Spanish.....	15104-105
Greek, intermediate reader.....	1597
Thai reference grammar.....	9807
Foreign social science bibliographies	
series.....	186, 6047, 15324
Foreign trade, see Commerce—also	
names or classes of commodi-	
ties—also names of countries	
or places.	
Foreign-Trade Zones Board, report	
1963.....	14294
Foreign understanding and interpreta-	
tion of United States educa-	
tion.....	6566
Foreigners, see Aliens.	
Forensic medicine, see Medicine.	
Forest conservation, see Forests and	
forestry.	
Forest fires:	
Alaska.....	10590
behavior as affected by warm sea	
breeze.....	8060
calculating national fire-danger	
rating spread index by com-	
puter.....	12456
comparing severity of fire seasons.....	18067
fire control notes, quarterly.....	3507
fuel moisture percentages as guide	
for evaluating severity of fire	
seasons.....	12455
hourly variation in fire danger in	
Lake States.....	12463
intermountain area, national fire-	
danger rating system, using	
conversion tables.....	12454
Pacific Northwest, fire season, 1963.	
prevention—	
knowledge of California hunters.	
woodland protection.....	8690
protecting forests from fire.....	2364
spread mechanisms, research prog-	
ress report.....	5817
timber losses.....	12474
Forest Genetics Institute, see Institute	
of Forest Genetics.	
Forest lands, see Forests and forestry.	

	Entry
Forest nurseries:	
forest trees in U.S., 1963, report,	
list.....	8703
tree planters' notes.....	791,
8702-3, 12483-484, 14335,	
21330	
index.....	12483
Forest pest leaflets.....	767,
12433-484, 14298-300, 15936,	
18043-45, 21324.	
Forest planting:	
Central States, practice.....	1694
direct seedling of northern red oak,	
variable stocking as problem in	
experiments.....	8645
furrow seeders.....	14327
New Mexico, western, seedling test	
with fourwing saltbush.....	2380
southwestern Wisconsin, ground	
preparation costs and 1st-year	
survival of planted red pine.....	775
tree planters' notes.....	791
8702-3, 12483-484,	
14335	
index.....	12483
trends in reforestation and its cost	
in Pacific Northwest.....	12485
windbarrier and seedling, report,	
1963, list.....	8702
Wisconsin, northern red oak, seed-	
ing and planting tests.....	12475
Forest products:	
eastern Kentucky, forest industry	
processing and marketing com-	
plex.....	13666
fungus defects, list of publications,	
marketing laboratory, research fa-	
cility at Princeton, W. Va.....	6740
Forest Products Laboratory:	
development of natural finish.....	18059
hardwood veneer grading system.....	8642
preparing cross sections of paper	
and paperboard, methods used.....	12443
publications, lists.....	8632, 19748
chemistry of wood.....	18046
drying of wood.....	8631
growth, structure, and identifi-	
cation of wood.....	6741
structural sandwich, plastic lami-	
nated, and wood-base compo-	
nents.....	18047
research for developing wood utili-	
zation program in West Vir-	
ginia.....	6744
Forest Products Marketing Labora-	
tory, general information.....	768
Forest resources, see Forests and fore-	
stry.	
Forest Service:	
appropriations, 1963—	
hearings.....	6338, 8436
law.....	13904
reports.....	8288, 8420, 13951
career opportunities, nonprofes-	
sional.....	9954
construct and maintain roads and	
trails for national forests—	
law.....	21149
reports.....	14103, 19487
deficiencies in award, etc., of timber	
sales contracts, California re-	
gion, GAO report.....	19752
engineer, your gateway to future	
career.....	37
firefighters, overpayment of	
wages—	
GAO report.....	8727
validate, report.....	15512
laws relating to establishment and	
administration of national fore-	
sts and to other activities.....	13378
national forest log scaling hand-	
book.....	14302
range resource on lands adminis-	
tered by, court cases related to	
administration.....	15935
report, 1963.....	18049

# INDEX 1964

	Entry
Forest Service—Continued	
research notes.....	772-783.
2374-87, 8635-70, 6743-49,	
10589, 12441-472, 14308-329,	
18050-78, 21326-328.	
research papers.....	784-790.
2388-91, 6750-51, 8671-94,	
10590, 12473-481, 14330-333,	
18079-86, 19749-750.	
resource bulletins.....	8695-8700,
	12482, 21329
timber appraisal policies and pro-	
cedures, general review.....	2351
wood utilization research activities.....	7939
Forest tent caterpillars, general in-	
formation.....	12433
Foresters:	
employment outlook.....	9390
examination announcements.....	211, 11946
forestry aide, suggested training	
program.....	15846
Forestry, see Forests and forestry.	
Forestry Development Division, TVA	
annual report 1963, forestry	
activities and accomplish-	
ments.....	1630
Forests and forestry:	
agricultural programs in forestry	
(address).....	13577
Alabama forests.....	8698
bibliography, PL-480 translation	
program.....	11662
burning slash, tests of wind ma-	
chine.....	14324
careers in forestry.....	7933
Caribbean forester.....	3305
Colorado's forest area.....	6745
conditioning loblolly pine stands	
for regeneration.....	787
conservation—	
history highlights.....	9934
lists of publications.....	5641
teaching aid, in our forests are	
many mansions.....	2356
cooperative State-Federal research,	
cull development under manage-	
ment of hardwood stands.....	788
East European industries, transla-	
tions.....	896,
944, 1010, 1045, 1066, 1137, 1210,	
2536, 2551, 2564, 2693, 2870,	
4919, 4944, 5124, 5185, 5213,	
5227, 5318, 5395, 7084, 7999,	
7115, 7136, 7214, 7240, 7304,	
8873, 8960, 9057, 9086, 9241,	
9313, 9358, 10721, 10773, 10830,	
10837, 10873, 10897, 10923,	
11048, 11059, 11074, 11146,	
11157, 12127, 12590, 12620,	
12673, 12693, 12714, 12749,	
12766, 12793, 12814, 12831,	
12871, 12894, 12915, 12947,	
13006, 14439, 14459, 14501,	
14559, 14589, 14611, 14625,	
16040, 16058, 16098, 16227,	
16321, 16350, 16378, 16403,	
16523, 16550, 18195, 18247,	
18272, 18299, 18328, 18352,	
18427, 18463, 18493, 18510,	
18537, 19879, 19980, 20074,	
20178, 20192, 20328, 20349,	
20361, 21386, 21417, 21512,	
21531, 21563, 21572, 21581,	
21616, 21627.	
eastern Kentucky, industry pro-	
cessing and marketing com-	
plex.....	13666
eastern Oregon's forest resources.....	8696
fair labor standards act, applica-	
bility to forestry or logging	
operations.....	16913
forage and cattle management in	
longleaf-slash pine forest	
lands.....	13583

	Entry
Forests and forestry—Continued	
forest area and timber volume in	
western South Dakota.....	14330
forest disease research in north-	
east, guide.....	769
forest industry statistics, 1962,	
Mississippi.....	8699
forest resource report.....	18048
forestry aide, suggested training	
program.....	15846
Illinois, forest area, by counties.....	18051
Industries, Brazil.....	18048
Insects—	
conditions in United States,	
1963, report.....	12432
2 plot transfer devices developed	
for aerial photographic trend	
surveys.....	14328
Intermountain Region timber story.....	12436
investment rates-of-return, deter-	
mining by electronic computer.....	8694
Lake States, rational for small	
woodland research.....	8634
loans.....	15220
making forest land ownership prof-	
itable (address).....	12435
managing your woodlands, how to	
do it guides.....	2359-68
mathematical methods, perspec-	
tives, Rumanian study.....	18285
Michigan, forest owners and timber	
management.....	12477
Minnesota, commercial forest land,	
ownership, 1962.....	12462
national bank loans on forest	
tracts, liberalize restrictions—	
hearings.....	6346, 12255
law.....	13800
reports.....	4466, 12226
national forestry research program.....	11774
natural regeneration by control-	
ling seed-eating rodents.....	18070
octal accounting, byproduct of for-	
est growth studies.....	14323
public forestry assistance for small	
woodlands.....	19101
research notes.....	772-783,
2374-87, 6743-49, 8635-70,	
10589, 12441-472, 14308-329,	
18050-78, 21326-328.	
research papers.....	784-790,
2388-91, 6750-51, 8671-94,	
10590, 12473-481, 14330-333,	
19749-750.	
resource bulletins.....	8695-8700,
	12482, 21329
role of forestry in prosperity of	
rural America (address).....	1718
silvical characteristics, white pine.....	8677
site preparation, what do you	
mean?.....	14318
small woodland owner in Missouri	
Ozarks, close-up.....	12473
South, major forest types, map.....	2357
TVA activities, 1963.....	1630
woodland, Douglas-fir, 13 years of	
thinning.....	8657
woodland protection—	
fire prevention.....	2364
grazing.....	2365
Wyoming resources.....	12482
see also Forest fires—Forest nur-	
series—Forest planting—Nati-	
onal forests—Site indexes—	
Timber—Trees.	
Forge shops, see Forges.	
Forgeries, and counterfeiting, Japa-	
nese scientific police research.....	9064
Forges, employment outlook, forge	
shop occupations.....	9428
Forgings:	
dies, electroslag build-up, USSR	
study.....	11143
Hungarian industry, current status	
and future, translations.....	7203

# JANUARY-DECEMBER

	Entry
Forgings—Continued	
steel, current industrial reports.....	3390
<i>see also</i> names of metals, etc., forged.	
Formosa:	
foreign trade regulations.....	18184
labor conditions in Taiwan.....	5444
labor law and practice in Taiwan (Formosa).....	14690
Forms (concrete construction), <i>see</i> Molds (forms).	
Forms, blanks, etc., management guide, change.....	5624
Forray, M. J., thermal stresses and deflections in rectangular panels.....	4227
Forrester, Anne N., educational data, Algeria.....	14182
Forayth, Gordon J., reclamation era.....	3064
Fort, E. F., relief.....	21183
Fort, W. K., relief.....	21183
Fort, <i>see</i> name of fort, except when occurring as first word of town, etc.	
Fort Bend County, Tex.:	
transfer from Galveston division to Houston division of southern district of Texas—	
law.....	8221
reports.....	4528, 6284
Fort Bowie National Historic Site:	
establish—	
hearing.....	14143
law.....	17369
reports.....	8324, 15737
Fort Campbell, Ky., military main- tenance personnel, inefficient and uneconomical utilization, Army Dept., GAO report.....	12491
Fort Caroline National Memorial, gen- eral information.....	13301
Fort Cobb Dam, design and construc- tion.....	1574
Fort Davis National Historic Site, general information.....	20662
Fort Devens Military Reservation:	
Army to adjust legislative jurisdic- tion exercised by U.S.—	
law.....	17243
reports.....	365, 14111
Fort Hall Indian Reservation, ground water for irrigation.....	2426
Fort Jay Military Reservation:	
YMCA building, acquire, authoriza- tion—	
law.....	17439
reports.....	17524, 17828
Fort Jefferson National Monument, general information.....	7611
Fort Larned National Historic Site:	
establish—	
law.....	17400
reports.....	344, 17775
Fort Lauderdale, Fla.:	
hurricane survey, engineer report— departmental edition.....	6589
document edition.....	6205
Fort Leavenworth Military Reserva- tion:	
State highways bordering, retrocede jurisdiction to Kansas—	
law.....	17360
reports.....	14110, 17522
Fort Miles Military Reservation:	
Army to convey lands to Dela- ware—	
hearing.....	6496
law.....	1957
report.....	2209
land, convey to Delaware by quit claim deed, report.....	2071
Fort Mojave Indian Reservation, ex- cept from 25-year lease limita- tions, law.....	247
Fort Peck area, Mont., geology.....	8767

	Entry
Fort Pulaski National Monument, general information.....	13302
Fort Rock Basin, geologic factors that control occurrence and availa- bility of ground water.....	19783
Fort Smith, Ark., population, special census.....	17107
Fort Totten Indian Reservation:	
Devils Lake Sioux Tribe, donate land to—	
law.....	1923
report.....	496
Fort Town (ferry boat):	
admit to American registry.....	1910, 2001, 4523
Fort Union National Monument, gen- eral information.....	11464
Fort Union Trading Post National Historic Site, establish, report.....	14062
Fort Vancouver National Historic Site, general information.....	14968
Fort Walton Beach, Fla.:	
land conveyance, from Eglin Air Force Base, change designated use—	
law.....	17247
reports.....	366, 14113
Fort Worth, Tex.:	
occupational wage survey.....	7408
principal electric facilities, map.....	678
Fortifications, foreign research in pro- tective construction.....	7872
Fortran, <i>see</i> Electronic data process- ing systems.	
Foras, <i>see</i> names of forts.	
Forums (discussion and debate):	
syphilis and other treponematoses, proceedings.....	11567
Forwarders, <i>see</i> Freight forwarders.	
Fosberg, Michael A., warm sea breeze.....	8660
Fossils:	
Canal Zone and adjoining parts of Panama.....	6803
contributions to paleontology (se- ries).....	4798, 15951-952, 18137-138, 21356
contributions to stratigraphic pa- leontology (series).....	6799
Eniwetok Atoll, Marshall Islands.....	15945
Eocene megafossils from Ishigaki- shima, Ryukyu-retto.....	18128
in Ordovician tuffs, northeastern Maine.....	14338
organic, utilization to increase yield of agricultural crops, USSR study.....	16078
paleontology of Ishigaki-shima, Ryukyu-retto (series).....	18128, 21353
paleontology, publications, list.....	9768
<i>see also</i> paleozoic era.	
Foster, Albert B.:	
soil and water conservation activi- ties for Boy Scouts.....	16964
teaching soil and water conserva- tion, classroom and field guide.....	9960
Foster, Eileen G., relief of estate.....	6237, 21223
Foster, George H., dryeration, corn drying process.....	9910
Foster, Margaret D., water content of micas and chlorites.....	12512
Foster, Norman G., mass spectra and correlations with structure for 23 alkylthiophenes.....	13113
Foster home care, <i>see</i> Aged—Child placing.	
Foster Wheeler Corporation, overpric- ing of ship propulsion boilers, GAO report.....	6778
Fott's textbook on algology and prob- lems connected with Soviet sur- vey on algae, USSR.....	5409
Fougere, Paul F., mutually consistent magnetic charts based on or- thogonal functions.....	20964



# INDEX 1964

	Entry
Foundations (charitable and educational):	
private research and other activities, 1960.....	18834
see also Charitable Institutions.	
Foundations (construction):	
grouting, field technique and inspection, engineering and design manual.....	617
soil mechanics, foundations, and earth structures, Navy design manual, change.....	3197
Founding:	
investment and chill casting, problems, USSR articles.....	14476
investment casting—	
new technology, USSR study.....	14513
technology, new developments, USSR study.....	20226
Foundries:	
copper-base products, current industrial reports.....	3391
foundry occupations, employment outlook.....	9445
iron and steel—	
current industrial reports.....	3390
industry wage survey.....	2965
Fountain Valley, Colo.:	
computations of drawdowns caused by pumping of wells.....	12516
ground water resources of area.....	12516
Four-frequency radar master console.	5590
4-H clubs:	
conserving our national resources, leader's guide.....	11778
general information.....	15217
home furnishings program, objectives, etc.....	5849
ideas, 4-H and youth development (newsletter).....	6630
Fowler, Henry H.:	
remarks—	
Nov. 3, 1963.....	3178
Nov. 21, 1963.....	1643
Jan. 14, 1964.....	5732
Mar. 2, 1964.....	7825
Fowler, K. A., effect of uranium on isothermal transformation and hardenability of low-alloy steel.....	18697
Fowler, Laurie G., further studies of protein and calorie levels of meat-meal, vitamin-supplemented salmon diets.....	8623
Fowler, Marvin E., forest disease research in the northeast, guide.....	769
Fox, Bernard H., alcohol and traffic safety.....	5552
Fox, Jay, boundary layers on rotating spheres and other axisymmetric shapes.....	20614
Foy, Bernard L., bibliography for TVA program.....	1629
Foy, C. D., toxic factors in acid soils of southeastern U.S. as related to response of alfalfa to lime.....	5857
FPC, see Federal Power Commission.	
FPC R series.....	4702, 8552
FPC S series.....	663
	2321, 6641, 12392, 19690
FPL, see Forest Products Laboratory.	
Fraas, Foster:	
electrostatic separation of high-conductivity minerals.....	9521
linear correlation of magnetic susceptibility with chemical composition of minerals.....	7456
magnetization delay in separation of minerals.....	9527
Fractionation, vapor, of tektite melts.....	20570
Fracture of metals:	
brittle fracture propagation studies.....	1575-76
cleavage fracture of polycrystalline iron, micromechanisms.....	13437

	Entry
Fracture of metals—Continued	
crack extension force dependence on crack length for single-edge-notch tension specimen.....	16707
E-steel, exhaustion of ductility and brittle fracture caused by pre-strain and aging.....	16853
fatigue-crack propagation of titanium and stainless-steel alloys, etc.....	20587
heat-treated 4340 steel, effect of fatigue crack on notch strength and fracture development.....	5588
low-stress brittle fracture in mild steel.....	5677
neutron embrittlement of reactor pressure vessel steels.....	5613
pressure vessels, test criteria application to fracture-safe design.....	13339
steel, heat-treated 4340, specimen size effect on fatigue crack strength.....	13335
stress-intensity factors for single-edge-notch tension specimen by boundary collocation of stress function.....	16706
titanium alloys, hot-salt stress-corrosion cracking phenomenon.....	21730
Fraise, Georges, relief.....	19544
Frame houses, see Houses.	
France:	
atomic energy cooperation for civil uses, agreement.....	20839
cherry production.....	12429
Communist Party—	
proposals on immigrant labor problem.....	11151
17th Congress, proceedings and comments, translations.....	16059
delegations interview with Mao Tse-tung and impressions following Asian tour.....	8987
dollar problem, report on factfinding trip abroad.....	10412
economy, basic data.....	8818
education.....	577
electricity tax on surplus commodity housing, agreement.....	16876
foreign aid to underdeveloped nations, wasted or productive?.....	11022
French nuclear research and developments.....	10861
gasification patents, index.....	18660
market for photographic products.....	19279
military and nuclear developments, press reports.....	14581
north coast, sailing directions, change.....	7631
nuclear development and Force de Frappe, press information.....	12725
nuclear power, development of striking force.....	12761
nuclear research and installations.....	12627
nuclear strategy, installations, expenditures.....	19897
Paris and the 3d world.....	10995
pocket guide.....	20986
press reports on French nuclear policy and installation.....	18325
viewpoint of French Left, Italian Socialist interviews.....	12970
weather stations, agreement.....	7778
Francis, Howard T., space batteries.....	9540
Francis Case Memorial Bridge, designate, report.....	15782
Francisco, Charles C., modification and testing of temperature-humidity measuring set AN/TMO-11(A).....	7961
Francolins, see Partridges.	
Frank, John E., school dental care in community with controlled fluoridation.....	11576
Frank, Waldo, testimony, hearing.....	585

# JANUARY-DECEMBER

	Entry
Franke, Fritz R., 4th status report on fuel cells.....	8124
Frankel, Harry M., cerebral arteriovenous differences in metabolic substrates during hyperthermia.....	17015
Frankfort, Ky., accident.....	14405
Frankfort Arsenal, memorandum report, MR series.....	9087
Frankfurt, Germany, normal phase variations of 18 kc/s signals from NBA observed.....	3052
Franking privilege:	
Kennedy, Jacqueline B., provide, law.....	1924
telegraph and telephone, FCC rules and regulations.....	3995
Franklin, Edeltraud E., relief.....	15426
	17224, 17681
Franz, O. G.:	
photographic measures of double stars.....	9668
tables of X and Y, elliptic rectangular coordinates.....	16773
Fraternity of the Impatient.....	20821
Fraud:	
fakes and swindles in health field, catalog.....	19743
fraud and mailability, enforcement action.....	3536
health, affecting the elderly, hearings.....	14122, 15788, 17862
interstate mail order land sales, hearings.....	19586, 21237
mail, how postal inspection service protects you.....	20731
preneed burial service, hearing.....	19587
Freche, John C., progress in superalloys.....	20617
Frederick, Lee M., teaching opportunities, directory of placement information.....	12328
Fredericksburg Magnetic Observatory, magnetograms and hourly values.....	1848, 4402
Fredkin, Edward, programming needs for automated laboratory for psychological research.....	1736
Free energy:	
formation.....	7436
muscovite.....	
sulfides of manganese, iron, zinc and cadmium.....	10644
Free enterprise, see Laissez faire.	
Free fall:	
drop tests of F-100D ejection seat occupied by articulated dummy or live jumper.....	5884
human survivability.....	1791
human trajectories.....	13617
Free radicals, interactivation, USSR study.....	1246
Freeburger, Adela R., education in Chile.....	6563
Freedom, see Liberty.	
Freeman, Frankie M., nomination, hearing.....	17881
Freeman, J. J., real-time compensation for tropospheric radio refractive effects on range measurements.....	20536
Freeman, Orville L.:	
addresses, remarks, etc.—	
Apr. 2, 1963.....	23
Oct. 1, 1963.....	1713, 1715
Oct. 7, 1963.....	1689
Oct. 9, 1963.....	1712, 1714
Oct. 10, 1963.....	1716
Oct. 11, 1963.....	1690
Oct. 22, 1963.....	1691
Nov. 4, 1963.....	5809, 5812
Nov. 7, 1963.....	7943
Nov. 12, 1963.....	5807
Nov. 15, 1963.....	5808

	Entry
Freeman, Orville L.—Continued	
addresses, remarks, etc.—Con.	
Nov. 19, 1963.....	5810
Nov. 20, 1963.....	5866
Dec. 5, 1963.....	7942
Dec. 9, 1963.....	11749
Dec. 14, 1963.....	5824
Jan. 9, 1964.....	7907
Jan. 28, 1964.....	7917
Jan. 31, 1964.....	7945
Feb. 4, 1964.....	7944
Mar. 17, 1964.....	11750
Apr. 15, 1964.....	11781
Apr. 28, 1964.....	11748
May 27, 1964.....	13575-576
July 24, 1964.....	16943
July 27, 1964.....	16949
Sept. 25, 1964.....	20907
Freemasons, see United Supreme Council, 33d Degree, Ancient and Accepted Scottish Rite of Freemasonry, Southern Jurisdiction.	
Freeport, Tex., saline water demonstration plant, report.....	19813
Freer Gallery of Art:	
Armenian manuscripts.....	6752
oriental studies.....	6752
Freeze-drying of foods, coat projections.....	4210
Freezers, home, selection and use.....	19075
Freezing:	
bakery products, commercial, current practices, problems, and prospects.....	19086
saline water conversion, research.....	10679
soils, trafficability forecasting, pilot study.....	14211
see also names of commodities, etc., frozen.	
Freight:	
commodity statistics—	
annual report 1962.....	8839
motor carriers, 1961.....	12568
motor carriers, 1962.....	19829
quarterly.....	3537
Freight cars:	
adequate supply, insure, report.....	15677
railway car building industry, review of 1963, outlook for 1964.....	8099
rules governing pool of CEMA countries, summary.....	16410
Freight forwarders:	
revenues, expenses and statistics.....	3981
transport statistics, 1962.....	4881
Freight rates:	
changes made, 1960-64.....	15993
amendments.....	15991
cost of transportation by class 1 and 2 motor common carriers—	
by region or territories, 1963.....	18189
Central region.....	8837
New England region, 1962.....	4872-73
discriminatory ocean rates and balance of payments, hearings.....	6190, 10149, 19435
Freight trains, see Railroads.	
Freitag, Ruth S., union lists of serials, bibliography.....	20453
Fremont, Calif., clay mining, processing, and utilization, methods and practices.....	1404
Fremont County, Wyo.:	
Crooks Gap area, geology and uranium deposits.....	14337
geology of Shotgun Butte area.....	8737
Fremont National Forest, western pine beetle damage, survey.....	2395
French, Judson C., measurement of bulk resistivity of semiconductor materials for electron devices.....	21785

# INDEX 1964

Entry	Entry
French, Robert R., activation of Bureau of Commercial Fisheries research vessel George B. Kelez-----	4731
French Equatorial Africa, official publications, 1946-58, guide-----	11306
French Guiana, economy, basic data-----	21085
French Gulch quadrangle, Calif., geology-----	8754
French language, labor terms-----	8835
French West Indies, <i>see</i> West Indies.	
Freon 113, film boiling heat-transfer coefficients obtained in forced flow, correlation study-----	13230
Frequencies:	
beat, use for detection of transverse modes of ruby lasers-----	19165
natural, in coupled bending and torsion of twisted rotating and nonrotating blades-----	14778
vibration of buckled circular plates. <i>see also</i> Radio frequencies-Television channels.	7568
Frequency distribution (statistics): techniques for fitting to hydrologic data-----	9931
Frequency meters:	
cavity 2.60 through 26.50 GC (KMC), instrument calibration procedure, technical manual-----	13365
developed at National Bureau of Standards-----	9639
Frequency modulation, <i>see</i> Radio frequency modulation.	
Frequency of maximum water equivalent of March snow cover in North Central U.S.-----	21922
Frequency ranges for existence of waves in cold collisionless hydrogen plasma-----	11403
Frequency response:	
functions and coherence functions for multiple input linear systems-----	9534
nucleate pool boiling heat transfer-----	19238
Frequency standards:	
portable rubidium vapor, technical note-----	11439
transistorized, Polish study-----	21597
Freshwater fishes, <i>see</i> Fish and fisheries.	
Fresnel cup reflector directs maximum energy from light source-----	13173
Fresnel integrals, modified, arising in theory of diffraction by variable screen, computation-----	21784
<i>see also</i> Equations.	
Fresno County, Calif., geomorphology of segmented alluvial fans-----	10637
Fretting corrosion, greases, reduction by pressure and antiwear additives-----	9688
Frey, J. J., preselect address unit for IBM 1620 computer-----	11859
Freyrik, Henry S., Jr., nonlinear response of windows to random noise-----	3018
Friction:	
and wear of nickel-aluminum alloys and sulfur-modified steels in vacuum-----	13235
coefficients and wear properties of cermet materials for X-20A nose gear skid-----	5877
coefficients of wire brush skids constructed with René 41 bristles, investigation-----	19134
theory of metal, Czechoslovakian study-----	2797
turbulent and laminar flow of hydrogen over parallel tungsten plates at 5000° R-----	18763
Friction-Continued	
wear and decomposition mechanisms for polymer compositions in vacuum-----	3027
wear and dynamic seal studies in liquid fluorine and liquid oxygen-----	18779
<i>see also</i> Skin friction (aircraft).	
Frictional wedge shock mount is inexpensive, has good damping characteristics-----	14802
Friedman, Sam, hydrogenation of New Mexico coal-----	14752
Friedmann, Herbert, evolutionary trends in avian genus Clamator-----	21869
Friedmann, Zoltan, relief-----	1888, 2147
Friendly American, a book of hope-----	9684
Friendship:	
friendly American, 50 personal stories-----	9684
therapy of helping troubled youth (address)-----	10086
treaty with Belgium-----	1605
Fringe benefits, <i>see</i> Employee benefit plans.	
Frio River:	
vicinity of Three Rivers, Tex., flood control, authorize survey-----	13915
law-----	14088
report-----	
Frisch, Harold P., spring-mass representation of free-free nonuniform bar in response to longitudinal forces-----	18749
Fritch, D. J.:	
bending moment data from ships at sea-----	7725
measurements of midship bending stresses on 2 C4-S-B-5 dry-cargo ships operating in North Atlantic service-----	18938
Fritz, Wilbert G., role of ARA technical assistance in major iron ore problems of redevelopment areas-----	11826
Frogfishes, 3 new species from Indian and Pacific Oceans, with notes on other species (family Antennariidae)-----	18823
Frogs:	
can cognitive self-learning system determine moment at which tadpole changes into frog? USSR study-----	894
labyrinthine efferent impulses-----	4259
oocytes, nuclear structures, investigation, USSR study-----	5269
Rana temporaria, oocytes, localization of nucleoprotides, detection by means of ultraviolet and luminescent microscopy, USSR study-----	5007
From airplane to spaceship, notes of astronaut flight instructor, USSR-----	12617
From school to work-----	5846
Frommer, Donald W.:	
anionic flotation of silica from iron ores-----	9516
experimental upgrading of artificial magnetite concentrates by flotation-----	7433
Front Range:	
Colorado-----	
altered wallrocks in central part of mineral belt-----	4795
geology of uranium deposits-----	18106
uranium deposits geology of central part of mineral belt-----	806
Precambrian quartzite-schist sequence along Coal Creek, relationship to Idaho Springs Formation-----	18135
Frontier Airlines, Inc., accident-----	13789

# JANUARY-DECEMBER

	Entry		Entry
Frost, E. M., apparatus for determining helium content of gas mixtures	21715	Fruit—Continued	
Frost, Robert, a backward look, lecture by Louis Untermeyer	9485	search for harder fruits	4188
Frost, W. T.: summary of snow survey measurements for Oregon	3136	shelf life, extending by radiation technology	5987
water supply outlook and Federal-State-private cooperative snow surveys for Oregon	4142	storing fruits and vegetables on pallets in wholesale warehouses	4209
Frost, conditions, pavement design, engineering manual	14204	U.S. markets in Japan, factors affecting	18042
Frozen foods:		wholesale market, organization, Minneapolis-St. Paul and Duluth-Superior	5838
freeze-dried and frozen food industry	2267	see also Citrus fruit—Stone fruit.	
strontium-90 in foods at intermediate stages of preparation	20770	Fruit flavor concentrates:	
trailer, liquid carbon dioxide refrigeration, test	8	volatile, use in cellar treatment of wine	
see also Cold storage—also names or classes of foods frozen.		law	21145
Frozen ground:		reports	10205, 15711
penetration of shaped charges	8516	Fruit flies, see Flies.	
permanent and seasonal, in Mongolia	16027	Fruit juices, consumer purchases	3364
visual resolution and optical scintillation over	12344	Fruitland Mesa project:	
Fruchter, Dorothy A., counseling form for use by supervising officers	15234	construction, etc.—	
Fruit:		hearings	6360, 12137
canned, foreign agriculture circulars	3520	law	17426
canning industry, review of 1963, outlook for 1964	15209	reports	15493, 17797
containers, additional standard sizes, amend act—		Fruits, see Fruit.	
hearings	2124	Frunzenskiy Rayon of Moscow, party educational work	20122
law	17375	Fry, Glenn A., visual recovery from brief exposures to very high luminance levels	19177
reports	2037, 17749	Fry, Z. B., soil compaction investigation	641
culture, etc., publications, price list	16825	Fryklund, Verne C., Jr., ore deposits of Coeur d'Alene district, Shoshone County, Idaho	15948
deciduous, foreign agriculture circulars	3520	FTC, see Federal Trade Commission.	
dried, foreign agriculture circulars	3520	FTC-TIH series	7972
foreign trade prospects	15934	Fubini, Eugene G., nomination, hearings	521
fresh—		Fuchu Air Station, Japan, uneconomical replacement of vehicles, GAO report	6783
California-Arizona, Interstate hauling by rail and truck	16959	Fuel:	
market news, weekly summary	3539	atomic	8097
prices, 1963	13599	blast furnace, anthracite metallurgical briquets	7459
shipments, by States, commodities, etc., 1963	9907, 11734	briquets and packaged fuel—	
sold in selected markets, 1956-62, prices and spreads	7947	minerals yearbook chapter	18665
unloads—		producers, 1961	1401
eastern cities, by commodities, States, etc.	5789, 7879	Communist China, translations	910,
41 cities, 1963	7877	1102, 1213, 1339, 2603, 2611,	
midwestern cities, by commodities, States, and months	5791, 7881	2723, 2787, 2929, 4933, 4958,	
southern cities, by commodities, States and months	5792, 7882	4958, 5077, 5235, 5265, 6918,	
western cities, by commodities, States and months	5790, 7880	6933, 7031, 7104, 7154, 7281,	
wholesale market facilities, Milwaukee, Wis.	15214	8936, 8970, 10796, 12642, 12830,	
frozen jelled fruits	7896	14412, 14537, 14643.	
fruit situation	3542	costs for driers in cotton gins, Arkansas and Missouri	2261
harvesting and handling, use of cushioning materials	13567	distillate, alterability	5610
harvesting and orchard handling of fruits, mechanization	5796	Federal item identification guides for supply cataloging	12294
noncitrus, production, use, value by States, 1962-63	15129	supplements	3475
official grade standards and inspection	4182	Federal supply catalog—	
processed—		identification list, change	15829
plants under USDA continuous inspection, list	13558	management data list, changes	4601, 14161, 15830
standards for grades	19044	fuels and electric energy consumed in manufacturing industries, 1962 census of manufacturers, 1963	17078
produce, radiopasteurization, mobile gamma irradiator, conceptual design study	5986	mineral-fuel industries review, minerals yearbook chapter	1445
		retail prices and indexes	3978
		solid fuels industries, civil defense	16622
		statistics of railroads	3544
		utilization at metallurgical plants, technical progress and trends, USSR study	8947
		see also Fuel oil—Liquid fuels—Motor fuel—Reactor fuels.	
		Fuel briquets, see Briquets.	
		Fuel cells, see Electric batteries.	



# INDEX 1964

Entry	Entry
Fuel elements, <i>see</i> Reactor fuel elements.	
Fuel oil:	
bunker oil, foreign trade reports.....	4113
burner fuel oils, petroleum products survey.....	20495
diesel, petroleum products survey, 1963.....	1432
liquid fueling and dispensing facilities, Navy design manual, changes.....	3198, 20892
liquid petroleum fuel used by farmers in 1959, etc.....	9904
Fuel rods, <i>see</i> Reactor fuel rods.	
Fuel systems, propellant feed systems for ion engines, research and development.....	18147
Fuels, <i>see</i> Fuel—Reactor fuels.	
Fujita, Tetsuya:	
analysis of selected aircraft data from NNSP operations, 1962.....	11706
index to NNSP surface network.....	11697
Fulbright program, <i>see</i> Education.	
Fulkerson, Frank B.:	
economic aspects of silver production in Coeur D'Alene mining region.....	5476
mineral industry of—	
Montana.....	1418
Oregon.....	21704
Washington.....	1426
Fulks, J. R., on mechanics of tornadoes.....	11695
Fullam, Marie G., earned degrees by field of study and level projected to 1975.....	14181
Fuller, Dennis E.:	
aerodynamic characteristics of several proposed versions of Saturn V launch vehicle, etc.....	14883
effect of afterbody geometry and sting diameter on aerodynamic characteristics of slender bodies.....	1465
supersonic lateral-directional characteristics of 45° swept wing-body-tail model with various body cross-sectional shapes.....	16693
Fuller, Harry C., metallurgical studies of rhodonite ores, Silverton district, Colo.....	18118
Fulton, Joseph F., employment impact of changing defense programs.....	14710
Fulton, Patti J., relief.....	19380, 19555
Fulton, Illinois, bridge across Mississippi River, report.....	10210
Fulton, Iowa, bridge across Mississippi River, bearings.....	17663
Fulton air-to-ground pickup system for Caribou aircraft.....	11667
Fulton County, Ky., soil survey report.....	20809
Fumich, George, Jr., remarks, Dec. 6, 1963.....	1396
Fumigants:	
candidate, effectiveness to stored-product insects.....	11769
soil, diffusion, theoretical aspects.....	15
Fumigation, sulfur dioxide, grapes loaded in railway refrigerator cars.....	4211
Functions (mathematical), <i>see</i> Mathematics.	
Fund raising, voluntary health and welfare agencies within Federal service, manual.....	3705, 17136
Fundamentals of electronics.....	20685-692
Funds:	
centralized system, misuse criticized, USSR industrial development, translation.....	20288
Federal, new series.....	19708
Funds—Continued	
flows through financial intermediaries.....	12404
<i>see also</i> Money—Welfare funds—also names of departments, etc., for which funds are used—also subjects for which funds are used.	
Funeral rites and ceremonies, preneed burial service, hearing.....	19587
Fungi, antifungal action of synthetic fibers containing specific chemical groups, USSR study.....	992
<i>see also</i> names of fungi, or fungus diseases.	
Fungicides:	
development and study, USSR conference, report.....	21507
Federal insecticide, fungicide, and rodenticide act, amend—	
law.....	12000
reports.....	4480, 10216
notices of judgment.....	13572
relationship to Botrytis neck rot of onions.....	20900
Fungus diseases, forest products and decay in trees, list of publications.....	6740
Funk, David T., premium yellow-poplar seedlings, 8 years after planting.....	18050
Fur:	
catch in U.S., 1963.....	19741
furs, Federal item identification guides for supply cataloging.....	12296
supplements.....	3477
Fur seals, <i>see</i> Seals (animals).	
Furnace Creek Wash, geologic and hydrologic reconnaissance.....	21361
Furnaces:	
continuous, automation, USSR study.....	14629
equipment, Federal item identification guides for supply cataloging.....	12292
supplements.....	3473
forced warm air, industry review of 1963, outlook for 1964.....	4333
investment casting, USSR studies.....	2543
vacuum arc, USSR study.....	12710
wall design, application of computers to heat flow and cost analysis in.....	18699
<i>see also</i> Blast furnaces—Vacuum furnaces.	
Furnishings (household), <i>see</i> Household goods.	
Furniture:	
Federal item identification guides for supply cataloging.....	12296
supplements.....	3477
glass plastics and plasticized wood use, USSR industrial development.....	16252
household—	
current industrial reports.....	462
trade practice rules.....	2332
industry expansion in Tennessee Valley.....	5721
maintenance and repair, Navy policy, procedures, etc.....	15180
panels, portable apparatus for surface evaluation.....	8638
retail furniture report.....	3977
<i>see also</i> Office furniture and equipment.	
Furniture stores, <i>see</i> Stores.	
Furno, Aldo L., limits of flammability of hydrazine-hydrocarbon vapor mixtures.....	16646
Furry, Margaret S., how to prevent and remove mildew, home methods.....	11762

	Entry		Entry
Fusco, Gene C.:		Galerkin, B. G., method for solution	
citizens committees for better		of boundary value problems...	9626
schools.....	17912	Gallagher, C. C., output power from	
preparing city child for his school...	15854	GnAs lasers at room tempera-	
school-home partnership in de-		ture.....	19175
pressed urban neighborhoods...	10471	Gallagher, Cornelius E., report of 7th	
Fused salts, <i>see</i> Salts.		meeting of Canada-United	
Fuses (ignition devices):		States Interparliamentary	
general and mechanical, ammunition		Group.....	15540
series, engineering design		Gallagher, Ursula M., interprofes-	
handbook.....	94	sional teamwork to safeguard	
overprocurement of spare com-		adoptions.....	13778
ponents used for repair of Tar-		Gallates:	
tar and Homing Terrier mis-		antiradiation properties, USSR	
siles, Navy Dept., GAO report...	6780	study.....	9108
Fusion:		anti-ray effect under conditions of	
Atomic Energy Commission re-		irradiation with 1000 roent-	
search programs.....	133	gens, USSR study.....	14615
controlled nuclear fusion.....	13723	Gallberry, <i>see</i> Holly.	
weldability of heat-resistant mate-		Galleries and their use for develop-	
rial SAP, USSR study.....	20322	ment of shallow-ground water	
Fussell, William B., temperature of		supplies, with special refer-	
gray body most closely fitting		ence to Alaska.....	18152
solar extraterrestrial spec-		Galley equipment, <i>see</i> Kitchen equip-	
trum.....	18730	ment.	
Futures, <i>see</i> Commodity exchanges—		Gallie acid, <i>see</i> Sodium gallate.	
Speculation.		Gallinules, hunting, possession, trans-	
Fuzes, <i>see</i> Fuses (ignition devices).		portation, importation, Federal	
		regulations, 1964-65.....	15925
		Gallium, useful bearing lubricant in	
		high-vacuum environment.....	13177
		Gallium arsenide:	
		lasers, output power.....	19175
		photovoltaic device, new method	
		used to fabricate.....	14819
		Galvanic skin response, automatic	
		GSR analyzer.....	5898
		Galvanization, galvanizers' dress, use	
		for zinc recovery.....	11823
		Galvano:	
		commemorating golden anniversary	
		of Naval Air Station, Pensa-	
		cola, Fla.—	
		law.....	13868
		report.....	10268
		Galvanostagometry, new technique	
		based on negative pressure of	
		liquids for investigating electro-	
		chemical phenomena at	
		electrode.....	5894
		Galveston Biological Laboratory, <i>see</i>	
		Biological Laboratory, Galves-	
		ton.	
		Galvin, Cyril J., Jr., wave-height	
		prediction for wave generators	
		in shallow water.....	12341
		Gambel oak, <i>see</i> Oak.	
		Game and game birds:	
		black and gray francollins, study	
		and review.....	15931
		foreign, propagation and libera-	
		tions, summary 1960-63.....	10580
		inventory, 1962.....	2344
		migratory birds—	
		Federal regulations governing	
		hunting, possession, trans-	
		portation, importation in	
		Alaska, 1964-65.....	15925
		Federal regulations, 1964-65.....	19734
		salvage of sick, injured, etc.,	
		special permits.....	2346
		<i>see also</i> Water birds.	
		Games:	
		for automata, USSR study.....	2887
		game theory and its application to	
		social sciences, bibliography...	9784
		solution of discrete 2-person game	
		with bluffing, USSR study.....	14562
		theorems of theory of $\psi$ -stability	
		in cooperative games, USSR	
		study.....	7152
		theory, USSR study.....	20409
		<i>see also</i> Olympic games—Pan	
		American games.	
		Gamma functions, <i>see</i> Mathematics.	
		Gamma irradiator, <i>see</i> Irradiators.	

# INDEX 1964

Entry	Entry
Gamma rays:	
depression of antibody production after high dosage irradiation, USSR study-----	2489
effects of gamma radiation—	
damaging on seed, influence of cysteine-----	2515
on anthracite-----	9508
parent wheat seed, influence on radiosensitivity of progeny, USSR study-----	9008
progeny of irradiated insects, USSR study-----	2475
vestibular analyzer function, USSR study-----	2488
gassification of coal-----	7442
high-level dosimetry at Albany cobalt-60 facility-----	14747
microfluora of gamma-irradiated products, USSR study-----	10807
preparation of wood-plastic combinations-----	8066
radiation flux, inorganic reactions, industrial applications-----	7458
radiation from nuclear weapons, shielding, review and bibliography-----	7577
sealed sources, safety standard-----	7574
spectra, radionuclide analysis by stepwise multiple regression-----	9713
spectrometry, automatic fuel element enrichment differentiator (FEED) based on-----	5060
testicles of rats after irradiation with Cobalt-60, histochemical characterization of distribution of ribonucleic (RNA) and deoxyribonucleic (DNA) acids, USSR study-----	1271
Gamma spectra, see Spectra.	
Gammelgaard, Arne, rare, weak A antigens, in man-----	21011
Ganas, Ioanna, relief-----	6263, 10384, 11992
Ganglionic-blocking agents, Soviet application in surgery-----	1111
Ganslen, R. V., effects of some tranquilizing, analeptic and vasodilating drugs on physical work capacity and orthostatic tolerance-----	13736
GAO, see General Accounting Office.	
Garbage, see Refuse.	
Garcia, F. F., kinematic analysis of engine and pump inlet duct gimballed joint system in S-1C stage of Saturn V vehicle-----	20568
Garcia, Fernando S., aerodynamic analysis of Saturn 1, Block 1 flight test vehicles-----	7498
Garcia, George:	
controlling cane cactus with 2, 4-DP-----	12468
inexpensive runoff plot-----	782
Garden Creek:	
hurricane survey, engineer report—departmental edition-----	6590
document edition-----	6204
Gardening, see Gardens.	
Gardens:	
colonial, George Washington Birthplace National Monument-----	20663
gardening, consumer information, price list-----	21842
home and garden bulletins-----	28, 1701, 4203-4, 5828, 7919-23, 9043-44, 11758-762, 16953-955, 19074-79, 20920-923.
safe use of pesticides-----	11777
suburban and farm vegetable gardens-----	4203
watermelons-----	11767
Gardner, John W., A.I.D. and universities-----	12561
Gardner, Kelsey B., managing farmer cooperatives-----	646
Gardner, Richard N., address, Aug. 5, 1963-----	1599
Gardner, William I., report of task force on behavioral and social research-----	15029
Gardner, William N., Trailblazer I re-entry physics research vehicles-----	11386
Garfield County, Mont.:	
geology of Fort Peck area-----	8767
geology of Winnett-Mosby area-----	8756
Garland, James D.:	
occupational wage survey—	
Beaumont-Port Arthur, Tex.-----	18630
Charlotte, N.C.-----	14697
Chattanooga, Tenn.-Ga.-----	1382
Dallas, Tex.-----	7404
Fort Worth, Tex.-----	7408
Houston, Tex.-----	18639
Miami, Fla.-----	9462
Oklahoma City, Okla.-----	1379, 21671
San Antonio, Tex.-----	18604
Garland, W. F., enzymatic deoxygenation, new concept in corrosion prevention-----	1533
Garlock, Fred L.:	
balance sheet of agriculture, 1964-----	20911
revised estimates of non-real-estate farm debt owed to nonreporting creditors, etc., 1949-64-----	17906
Garner, T. Estelle, thermodynamic properties of sodium bromide and sodium iodide at low temperatures-----	11339
Garnes, Alva A., relief-----	433
Garnet, spin-wave anisotropy in parallel pumping experiments on YIG-----	9970
Garren, John F., Jr.:	
analog computer approach to V/STOL simulation-----	5509
effects of gross changes in static directional stability on V/STOL handling characteristics-----	20603
Garren, Kenneth R., measurement of errors in manually recording transit times of stars and distant planets-----	18761
Garrett, W. D., constitution and chemical properties of sea slicks, pt. 1, Bay of Panama-----	7650
Garrick, B. J., study of test reactor operating and safety experience-----	5963
Garrick, J. A. F., additional information on morphology of embryo whale shark-----	7597
Garrison diversion unit, see Missouri River Basin project.	
Gary, Ind., principal electric facilities, map-----	674
Gas:	
breakup of liquid jet in transverse flow-----	18755
exploratory well in Azerbaydzhan, USSR study-----	5344
explosions, experimental-----	5490
extractive industries of Rumania, research results-----	21502
gas-flame brazing of metals, USSR study-----	10965
gasification—	
bituminous coal with oxygen and steam-----	7443
coal in presence of gamma rays-----	7442
coal, underground, bibliography-----	5472
hydrogasification of high-volatile A bituminous coal-----	7453
patents, index-----	18660
generating, Army technical manual-----	8039
high-BTU, production by pressure carbonization of coal-----	11330
industry, injury experience, 1963-----	18663

	Entry
Gas—Continued	
lease no. Sacramento 037552-C, re-	
instate and validate.....	1868, 2162
leases—	
agreement with Navajo Tribe of	
Indians, approve, law.....	262
timely payment of rentals, re-	
port.....	17835
natural gas—	
act, regulations under, changes.....	14253
act, uniform accounting provi-	
sions.....	17984
analyses, U.S., 1961.....	11316
analyses, U.S., 1962.....	20481
deposits in U.S., potential of nu-	
clear explosives as stimulant	
for hydrocarbon production.....	13110
effect of concentration on igniti-	
bility of gallery atmospheres.....	5487
helium bearing, analyses, etc.....	1398
inert-gas cushions in storages,	
feasibility.....	18705
liquids and liquefied refinery	
gases, mineral industry sur-	
veys, monthly.....	3771
liquids, minerals yearbook chap-	
ter.....	21708
low-temperature phase equilibria	
of low helium content.....	18683
mineral industry surveys—	
monthly.....	3769
quarterly.....	3770
minerals yearbook chapter.....	21707
producers sales to pipeline com-	
panies, 1962.....	12392
publications, list, 1910-62.....	21692
retail prices and indexes.....	3978
sequenced sampling experiment.....	118
statistics of companies, 1962.....	2321
uniform system of accounts for	
companies.....	17984
USSR areas, schematic map for	
prediction.....	1327
well stimulation and techniques to	
prevent formation damage in	
oil and gas production.....	21690
see also Pipe lines.	
Gas analyzers, rapid helium-air ana-	
lyzer can measure other binary	
gas mixtures.....	7491
Gas appliances:	
and equipment, outlook for Amer-	
ican manufacturers in Nether-	
lands.....	21071
household and commercial, U.S.	
market in—	
Japan.....	145
Netherlands.....	146
Sweden.....	147
Gas bearings, see Bearings (ma-	
chinery).	
Gas chromatography, see Chromatog-	
raphy.	
Gas-cooled reactors, see Reactors	
(atomic).	
Gas exchangers, photosynthetic,	
gravity-independent, design	
study.....	11784
Gas filters, see Filters and filtration.	
Gas indicators, combustible, operation	
and interpretation of readings,	
safety data.....	18616
Gas metabolism, see Metabolism.	
Gas pipe lines, see Pipe lines.	
Gas turbines, see Turbines.	
Gas wells, see Gas.	
Gasdynamics of combustion.....	21779
Gases:	
absorbing—	
enclosed between parallel flat	
plates with flow and conduc-	
tion, radiant heat transfer.....	1483
enclosed in circular pipe with	
conduction, etc., radiant heat	
transfer.....	1484

	Entry
Gases—Continued	
combustion products, radiometer-	
pyrometer for analysis.....	16710
compressed, use and handling.....	5419
detectors, East German translation-	
diffusion parameters in atmosphere,	
Czechoslovak study.....	5081
electrically conductive, spiral mo-	
tion between cylinders in pres-	
ence of magnetic field.....	20628
encountered under pressurized air	
conditions, physiological ef-	
fects, safe use of respiratory	
protective equipment.....	18706
flammable—	
physical properties, maritime	
safety data.....	18615
safe use and storage on farm.....	9942
flows, application of oblique shock	
parameters for ratios of specific	
heats from 1 to 5/3.....	11421
heat-transfer measurement for bi-	
nary gas laminar boundary	
layers with high rates of injec-	
tion.....	20600
helium content of mixtures, appar-	
atus for determining.....	21715
high temperature, partition func-	
tions and thermodynamic prop-	
erties.....	7988
Industrial—	
current industrial reports, 1963.....	19292
review of 1963, outlook for 1964.....	6015
sulphur dioxide adsorption and	
recovery by using synthetic	
zeolites.....	1439
Infrared analysis during molten salt	
electrolysis of metals.....	14758
Inorganic, current industrial re-	
ports.....	163, 10053
Ionized—	
partially, in electric field, trans-	
port equations.....	11406
partially, transport properties, in	
presence of electric and mag-	
netic fields.....	14893
rarefied, flowing through channel	
with transverse magnetic field,	
Monte Carlo solution for char-	
acteristics.....	21768
least squares to pressures, volume,	
and temperature data, applica-	
tion method.....	16626
measurement of moisture, radio-	
release technique.....	13705
perfect, supersonic flows over bodies	
of revolution at small angles	
of yaw.....	16702
radio-protective action, USSR	
studies.....	16381
rare, photoionization cross sections.....	14781
rarefied—	
heat transfer for laminar slip	
flow in parallel plates with un-	
symmetrical wall heat flux.....	16719
laminar slip flow in parallel-plate	
channel or circular tube with	
uniform wall temperature, heat	
transfer characteristics.....	21770
sound transmission at low pressures.....	19180
total enthalpy of 1-dimensional noz-	
zle flow.....	7549
weakly coupled, kinetic theory.....	11861
see also Ideal gas—Mine gases.	
Gasification, see Gas.	
Gasoline:	
aviation fuels, petroleum products	
survey.....	9497
Federal tax refund, nonhighway and	
transit users.....	18165
motor, petroleum products survey.....	5479, 14741
safe use and storage on farm.....	9942



# INDEX 1964

Entry	Entry
Gasoline—Continued	Geer, Max R., washability studies, etc., coals from Pierce County, Wash. 21711
storage stability studies—	Gehlenite, low-temperature heat capacities and entropies at 298.15° K. 5489
radiotracer techniques 13104	Gehman, Clayton, industrial production measurement in U.S. 10543
use of tritium tracer techniques 7450	Gelger, Frances M., development research digest 14396
tax, increase for D.C. highway construction financing, hearings 12125	Gelado, Aurora M., relief 6424
tax refund—	Gelechiodea, see Stenomidae. 310
aerial applicators, report 10213	Gellinas, Wilfrid E., relief 12180, 13842
farmers 19819	Gemini 1-ton, amphibious, off-highway, air-transportable vehicle concept evaluation program 21908
nonhighway and transit users 849	Gems, see Precious stones.
Gasoline service stations, see Service stations.	Genealogy:
Gast, R. T., mechanical devices to expedite boll weevil rearing in laboratory 4189	records in National Archives, guide 14931
Gastrointestinal tract:	sources outside National Archives 1490
diseases, nitrogen balance of infants fed on lonite milk 5027	General Accounting Office:
resorption processes, mechanism of action of ultrasound, USSR study 16278	appropriations, 1965, legislative—
Gastropods:	hearings 8365, 15704
from Coffee Sand (Upper Cretaceous) of Mississippi 18126	law 17313
late Cretaceous gastropods in Tennessee and Mississippi (series) 18125-126	reports 8384, 15609
neogastropoda from Ripley, Owl Creek, and Prairie Bluff formations 18125	audit of Federal home loan banks and Federal Savings and Loan Insurance Corporation, change to calendar year basis—
tertiary mollusks of Canal Zone and Panama 6803	hearings 10314
Gate valves, see Valves.	law 17377
Gates, David M., line parameters and computed spectra for water vapor bands at 2.7μ 14037	reports 12054, 17746
Gates, John, testimony, hearings 8456	Comptroller General decisions—
Gates, miter-type lock, operating forces on 14213	B—(series) 3347
Gates (circuit):	digests 3422
NOR, combined with pulse-stretching circuit 20557	monthly 3346
Gatewood, J. S., drought effects on water resources of Southwest 4787	findings and recommendations for improving Government operations, 1963—
GATT, see General agreement on tariffs and trade.	departmental edition 8709
Gaussian function, see Normal probability function.	document edition 10173
Gavett, Earle E.:	policy and procedures manual for guidance of Federal agencies 792-793, 2398-2400, 3551-53, 6753-54, 8704, 10591, 12486, 21831
labor used to produce vegetables, estimates by States, 1959 9063	principles and standards and internal auditing guidelines, manual for guidance of Federal agencies 3551
truck crop production practices—	report, 1963—
Monterey County, Calif. 2260	departmental edition 2307
Yakima County, Wash., labor, power, and materials, by operation 17903	document edition 1997
Gavin, Leon H., memorial services 6131	submissions of agency accounting systems for GAO approval, hearings 17651
Gavrishch, Ellen, basic data on economy of Mozambique 10695	transportation, manual for guidance of Federal agencies 3552
Gayle, J. B., S-IV all systems vehicle explosion 20567	General agreement on tariffs and trade:
Gayasky, V. N., Lenin prize candidate 9253	how it works to foster better understanding of international trade 10689
Gazetteers, see Geographical names.	Kennedy round of GATT negotiations, world trade at crossroads 8022
Gearing, pinion gear wear and failure problem in X-15 research vehicle auxiliary power unit 20947	trade agreements program and GATT, report 21166
Gears:	General Conference on Weights and Measures, 11th, transactions of meetings, Oct. 11-20, 1960, Paris, France 20622
conformal, for helicopter power transmission, investigation 20856	General Counsel, Agriculture Dept., appropriations, 1965, hearings 10286
plastic, use in ammunition items, feasibility, memorandum 17897	General Counsel of Treasury Department:
propulsion reduction, purchased from Westinghouse Electric Corp., Sunnyvale, Calif., excessive price paid by Navy Dept., GAO report 4759	digest of opinions 3420
Geary, A. L., high-temperature properties of refractory alloys 5971	report for Coast Guard, 1962 8461
Gedanken, Irving L., handbook on development of basic labor market information for small firms 2202	
Gedney, Donald R., Oregon's forest resources 8696	

	Entry
General Dyestuffs Corp.: stockholders' claims, amend Trading with the enemy act— hearings.....	12143
law.....	17349
reports.....	13982, 17539
General Dynamics Corporation: B-58 aircraft bomber recording system, overpricing by Melpar, Inc., on fixed-price purchase order 509, GAO report.....	6775
leasing of electronic data processing systems by General Dynamics/Astronautics division, San Diego, Calif., Air Force Dept., GAO report.....	19764
TFX contract investigation, hearings.....	4584
General Electric Co., leasing of electronic data processing systems, unnecessary costs to Government, GAO report.....	18095
General Land Office, cartographic records, list.....	7573
General Motors Corp., wage chronology, 1939-63.....	9877
General Services Administration: additional costs resulting from failure to consolidate certain Federal communications services in Washington, D.C., area, GAO report.....	12487
administrator to sell part of Cheil Air Force Station to Chanslor-Western Oil & Development Co., report.....	4543
appropriations, 1964— construction, proposed provision for payment of contractors claims.....	10359
deficiency, hearings.....	10285
appropriations, 1965— amendment.....	10192
hearings.....	10290
Federal records management, clarity authority— law.....	6176
report.....	4548
functions, basic laws and authorities, compilation.....	18096
handbook for training guards.....	7680
press releases, news.....	3889
report, 1963.....	4771
services available to Federal agencies.....	8747
sites for Federal buildings, acquisition, information.....	4774
unnecessary costs resulting from failure to consolidate leasing of intercity communications lines of civil agencies, GAO report.....	21343
unnecessary costs to Government for commercial long distance telephone calls made by civil agencies between cities served by Federal Telecommunications System, GAO report.....	8739
Generators, see names or types of generators.	
Geneticists, public health scientist, examination announcement.....	209
Genetics: bacteria, effectiveness of space factors on life, USSR studies.....	10979
cottonwood improvement system for commercial planters.....	18076
gatherings in East Europe.....	18237
human biochemical, translation.....	20106
immunity, theories of control mechanisms for antibody formation, etc.....	9006
molecular and radiation, effect on heredity, USSR studies.....	4895

	Entry
Genetics—Continued mutagenic and antimutagenic action of sodium gallate, USSR study.....	9061
plant, radioisotopes uses, bibliography.....	15283
population structure change through selection in case of overdomination, USSR study.....	12811
transfer of information, participation of both strands of DNA, USSR study.....	16355
Geneva, Switzerland: International Labor Organization Conference— House delegates to attend, appoint, report.....	10235
U.S. participation, hearings.....	19504
Gentry, Dwight L., bakery products, bibliography.....	5679
Geobotany, see Phytogeography.	
Geochemical prospecting, see Geochemistry.	
Geochemistry: analytical methods in geochemical investigations of Pierre shale (series).....	18127
contributions to geochemical prospecting for minerals (series).....	15943
contributions to geochemistry (series).....	21350
data (series).....	14343
exploration near Getchell mine, Humboldt County, Nev.....	15943
geochemical ecology, USSR study.....	12935
geochemistry of water (series).....	4805, 12313, 15954
geology and geochemistry of Steamboat Springs area, Nev. (series).....	19788
ground water in mine drainage problems.....	2423
natural waters. Blue Grass region, Ky.....	14350
rocks and related soils and vegetation in Yellow Cat area, Utah.....	21351
Steamboat Springs area, Washoe County, Nev.....	19788
Geodesy: abstracts pertaining to Communist China in Soviet journals.....	1248
equalization of USSR astronomical-geodetic network, problems.....	12686
geocentric latitude of space point, USSR study.....	16449
Hungary, work.....	1002
interpolation error determination of astronomical-geodetic plumb-line deflections— in west Bohemia Kraj, Czechoslovakia.....	2906
in western Czechoslovakia.....	12623
natural function tables for computing geographic positions on international ellipsoid.....	10117
Geodetics, see Geodesy.	
Geographers, employment outlook.....	9391
Geographic bulletins.....	9797, 18956
Geographic mobility: and employment status, May 1962, Mar. 1963.....	13074, 21677
cost.....	13663
Geographic Names Board: decision lists.....	796, 8749-50
gazetteers.....	8751, 15939, 18097-100, 21347
Geographical names: Asia, south and east regions.....	11617
Congo (Leopoldville), Republic of.....	18099
decision lists.....	796, 8749-50
gazetteers.....	8751, 15939, 18097-100, 21347
Kenya.....	18098
Northern Vietnam.....	15939
Norway, Svalbard and Jan Mayen.....	18097

# INDEX 1964

	Entry	Entry	Entry
Geographical names—Continued		Geology—Continued	
Tunisia -----	18100	Alaska—Continued	
Uganda -----	21347	quaternary deposits of Kenai	
United States, decision lists 796, 8759-50		Lowland and glacial history of	
Zanzibar -----	8751	Cook Inlet region -----	10644
Geography:		southeastern, geology and ore	
acta geographica Sinica, transla-		deposits of Bokan Mountain	
tions -----	5021	uranium-thorium area -----	6798
Communist China—		southeastern, Sumdum copper-	
translations from Chung-Kuo		zinc prospect -----	18101
hsin-wen -----	7334, 9109	Antelope-Ashwood area, Ore. -----	4778
translations from TI-II -----	7294, 12756	areal, northern Alaska, exploration	
geographic bulletins -----	9797, 18956	(series) -----	804, 10636, 19781
geographical factors affecting re-		artesian water in Malabar coastal	
gimes of rivers of USSR -----	20048	plain of southern Kerala,	
Korea, Republic, statistics -----	20098	India -----	12518
Mongolia—		Bald Knob quadrangle, Ferry and	
distribution of magma deposits -----	14528	Okanogan Counties, Wash. -----	18108
economic geography -----	10835	bedrock—	
soil and geography, USSR studies -----	11108	Fitchville quadrangle, Conn. -----	18109
teachers, advanced study, national		Kingston quadrangle, R.I. -----	18105
defense institutes, manual -----	21267	Penn Yan and Keuka Park quad-	
see also names of places.		rangles, N.Y. -----	12505
Geohydrology, see Hydrogeology.		Salem quadrangle and vicinity,	
Geological Survey:		Mass -----	10631
bulletins -----	797-801,	Trevton quadrangle, R.I.-Mass. -----	15942
2410-19, 4775-81, 6795-99,		valleys of New England coast as	
8752-80, 10629-633, 12503-508,		related to fluctuations of sea	
14337-339, 15940-943, 18101-		level -----	19787
114, 19771-780, 21348-351.		Wickford quadrangle, R.I. -----	10630
circulars -----	802,	Belmont and Calamine quadrangles,	
6800-2, 8761-62, 10634, 12509,		Wis -----	18103
18115-124.		Belo Horizonte, Ibirite, and Maca-	
geologists, examination announce-		cos quadrangles, Brazil. -----	10638
ment -----	19339	Bikini and nearby atolls, Marshall	
long range plan for resource sur-		Islands (series) -----	15945
veys, investigations and re-		Bluewater Springs area, Carbon	
search programs -----	4782	County, Mont. -----	15969
press releases -----	3890	Bradley, Calhoun and Ouachita	
professional papers -----	804-812,	Counties, Ark -----	12528
2420-23, 4783-98, 6803-10,		Bulgarian Academy of Science, Geo-	
8763-72, 10635-647, 12510-512,		logical Institute, services, etc. -----	5158
14340-347, 15945-952, 18125-		Bullfrog quadrangle and ore depos-	
138, 19781-790, 21352-356.		its related to Bullfrog Hills	
program review, hearing -----	15591	caldera, Nye County, Nev. and	
publications, 1879-1981 -----	15953	Inyo County, Calif. -----	18133
publications, monthly list -----	3788	Camp Ripley Military Reservation,	
research 1963—		Morrison County, Minn. -----	4813
geology and hydrology, short		Canal Zone and adjoining parts of	
papers -----	8772	Panama -----	6803
summary of investigations -----	812	central Great Smoky Mountains,	
research 1964, geology and hydro-		Tenn -----	8764
logy, short papers -----	14347, 19790	Cerro Gordo mining district, Inyo	
water supply papers -----	813-828,	County, Calif. -----	4788
2424-35, 4799-4824, 6811-27,		Christmas quadrangle, Gila and	
8774-83, 10648-661, 12513-529,		Pinal Counties, Ariz. -----	19774
14348-357, 15934-969, 18139-		Cleveland quadrangle, Bearpaw	
152, 19791-805, 21357-364.		Mountains, Blaine County,	
Geologists:		Mont -----	18104
electronic companion, USSR study -----	7023	contributions to Brazilian geology,	
employment outlook -----	9388	nonferrous metals (series) -----	6796
examination announcements -----	4397, 19339	contributions to economic geology	
Geology:		(series) -----	799-800,
Abajo Mountains area, San Juan		2418, 4781, 6797, 8755, 12508,	
County, Utah -----	18132	19775.	
abstracts pertaining to Communist		contributions to general geology	
China in Soviet journals -----	1248	(series) -----	801,
achievements in research in hydro-		2410, 2415-16, 4775-78, 4780,	
carbons, Rumanian study -----	21464	8754, 8760, 12505-507, 14338-	
aeromagnetic survey, USSR study -----	6928	339, 18104, 18108-109, 18111-	
Alaska—		112, 19773-774, 19776-778.	
Anchorage area -----	15964	contributions to geology of uranium	
Chandler River region -----	804	(series) -----	2413, 10629, 14337
geologic evaluation of Alaska's		copper deposits, N.C., Va., and Ala. -----	800
Good Friday earthquake, Mar.		Cosio Knob and Espinosa Canyon	
27, 1964, preliminary -----	10634	quadrangles, Monterey County,	
Imuruk Lake area -----	2416	Calif -----	12506
iron prospect, North Bradfield		Crook County, Wyo., northern and	
River -----	2914	western, resources -----	19795
Lost River tin mine area -----	8752	Crooks Gap, Fremont County, Wyo. -----	14337
northwestern, surficial, central		Dickson, Lawrenceburg, and	
Kobuk River Valley -----	18111	Waverly areas, western High-	
		land Rim, Tenn., ground	
		water -----	19799

ry

44

98

01

78

81

518

108

109

105

505

631

042

787

630

103

638

945

969

528

518

8133

813

803

864

4788

9774

8104

6796

800

2508

801

4780

1338

1111

14337

800

12506

19795

14337

19799

## Entry

Geology—Continued	
eastern Los Angeles basin, southern California (series)-----	10641
eastern Puente Hills area, southern California -----	10641
economic—	
Lakeland quadrangle, Fla.-----	19775
Plant City quadrangle, Fla.-----	799
Edgemont quadrangle, Fall River County, S. Dak.-----	21348
Edison-Maricopa area, Kern County, Calif -----	15957
Eureka quadrangle, Utah-----	8755
Fanny Peak quadrangle, Wyo.-S. Dak -----	2412
Farmington-Granby area, Conn.-----	10654
Fort Peck area, Garfield, McCone, and Valley Counties, Mont.-----	8767
Fort Rock Basin, Lake County, Oreg., ground water, factors that control occurrence and availability -----	19783
French Gulch quadrangle, Calif.-----	8754
Furnace Creek Wash area, Death Valley National Monument, Calif., reconnaissance-----	21361
geologic factors, effects on streamflow of Yakima River basin-----	4807
Geological Survey research, 1963, short papers-----	8772
geology and coal resources of coal-bearing rocks of Alabama-----	12508
geology and geochemistry of Steamboat Springs area, Nev. (series)-----	19788
geology and ground-water conditions of Clark County, Wash., with description of major alluvial aquifer along Columbia River -----	12517
geology and hydrology of Guam, Mariana Islands (series)-----	10640, 14340, 19784
geology and uranium deposits of southern Black Hills (series)-----	2411-12, 21348
geomorphology of segmented alluvial fans, Fresno County, Calif -----	10637
Georgetown Canyon-Snowdrift Mountain area, southeastern Idaho -----	12504
Great Smokey Mountains, Tenn. and N.C. (series)-----	2421, 8764
Guadalupe Mountains, N. Mex.-----	15949
Guam, Mariana Islands (series)-----	19784
Ishigaki-shima, Ryukyu-retto (series)-----	18128, 21353
Jarbridge quadrangle, Nev.-Idaho-----	4775
Jefferson City quadrangle, Mont.-----	4793
Jewel Cave SW quadrangle, S. Dak.-----	2411
Kiliuk-Etiviluk Rivers region, Alaska -----	10636
Kiliuk-Itkilik Rivers region, Alaska -----	19781
Lee and Sumter Counties, Ga.-----	2432
Lees Ferry area, Coconino County, Ariz -----	798
Linville Falls quadrangle, N.C.-----	19773
Los Alamos area, N. Mex.-----	19798
Luke area, Maricopa County, Ariz.-----	14356
Lyon County, Minn.-----	818
McMullen Valley, Ariz.-----	4811
magnetic and gravity data in Copper River Basin, Alaska, interpretation -----	21352
Minas Gerais, Brazil (series)-----	10638
mineralization associated with magnetic anomaly in part of Ely quadrangle, Nev.-----	18122
Mississippi embayment-----	12511
Mongolia, new landmark in study, USSR study-----	7165

## Entry

Geology—Continued	
Montgomery County, Ala.-----	6812
Mount Morrison quadrangle, Calif.-----	6804
Mount Rainier National Park, Wash -----	4796
Naval Air Missile Test Center area, Point Mugu, Calif., appraisal-----	2427
New Almaden District, Santa Clara County, Calif.-----	8765
New Hampshire, southeastern-----	19794
Nobles and Jackson Counties, Minn.-----	18146
North American, bibliography-----	18114
ore zones, USSR studies-----	16084
Oregon, northwestern, geologic sketch and interpretation of surveys -----	18112
Osgood Mountain quadrangle, Nev.-----	8768
Paradise quadrangle, Cache County, Utah -----	19778
Permian rocks in western phosphate field (series)-----	2420, 15946
Platte Canyon quadrangle, Colo.-----	12507
Powder River basin, southern part-----	10629
publications, list-----	9768
publications, price list-----	11546
Pumpkin Buttes area of Powder River basin, Wyo.-----	15941
Redwood Falls area, Minn.-----	15958
Reliz Canyon, Thompson Canyon, and San Lucas quadrangles, Monterey County, Calif.-----	4776
research 1964, short papers-----	14347, 19790
Rewey and Mimlin quadrangles, Wis -----	18102
Richardson County, Nebr.-----	21360
Rock County, Wis.-----	2428
Rumanian research-----	9217
San Antonio Creek Valley, Santa Barbara County, Calif.-----	12520
San Bernardino area, Calif., features -----	8774
Savannah area, Ga.-S.C.-----	4808
selected quadrangles in Massachusetts (series)-----	10631
selected quadrangles in Rhode Island (series)-----	10630, 18105
shorter contributions to general geology (series)-----	810, 6807, 8766-67, 8770-71, 10645, 12512, 14344-345, 15950, 18134-135, 19787.
Shotgun Butte area, Fremont County, Wyo.-----	8757
southern Black Hills pegmatites-----	4783
southern Carson Desert, Nev.-----	10639
Steamboat Springs area, Washoe County, Nev.-----	19788
strata in western interior, Haresiers as means of correlating units -----	8770
stratigraphy and structure of northern and western flanks of Black Hills uplift, Wyo., Mont., and S. Dak.-----	21354
studies in Puget Sound lowland, Wash. (series)-----	809
subsurface, National Reactor Testing Station, Idaho-----	12503
subsurface, northern Alaska exploration (series)-----	19782
surficial, and geomorphology of Lake Tapps quadrangle, Wash -----	809
Thomas and Dugway Ranges, Juab and Tooele Counties, Utah-----	14341
Tintic Junction quadrangle, Utah-----	6797
training of geological engineers at Moscow Geological Prospecting Institute -----	21594
Umatilla River basin, Oreg.-----	8777
upper Colorado River basin, water resources, basic data-----	19786



# INDEX 1964

	Entry
Geology—Continued	
upper Grand Ronde River basin, Union County, Oreg., resources	8776
upper Mississippi Valley-zinc-lead district (series)	18102-103
Upton quadrangle, Crook and Weston Counties, Wyo.	19776
uranium-bearing veins in conterminous U.S.	4797
uranium deposits, etc., central part of Front Range, Colo.	806
uranium deposits, Front Range, Colo.	18106
urban, growing importance	6802
USSR—	
aerial surveying and geology—research	5387
Uvalde County, Tex.	1082
Verde Valley, Mogollon Rim region, Ariz.	10652
Washington, D.C., and vicinity	2419
West Milton area, Saratoga County, N.Y.	12527
Wilmington-Reading area, Mass.	12524
Winnett-Mosby area, Petroleum, Garfield, Rosebud, and Fergus Counties, Mont.	18141
Yuma County, Colo.	8756
see also Carboniferous period—Cenozoic period—Devonian period—Hydrogeology—Paleozoic era—Phosphoria formation—Stratigraphy.	10651
Geomagnetic field:	
boundary and distortion in steady solar wind	13253
boundary in steady solar wind, ring current effect	13252
terminal shape, effect of uniform external pressure, etc., of solar wind	13254
Geomagnetism, see Terrestrial magnetism.	
Geometric effects of plate thickness.	9761
Geometric study of coherence properties of partially polarized electromagnetic radiation.	17007
Geometrical and inertial properties of class of thin shells of revolution	20522
Geometry:	
annular, single rod burnout conditions, water at 600 to 1400 psia	5560
chamber, in multi-stage flash evaporators	19816
channel, of Piedmont streams as related to flood frequency	10642
configuration, effects on transonic aerodynamic characteristics of canard airplane configurations	20595
first-order error statistics for 3- and 4-station hyperbolic fixes on spherical earth	19166
lay-flat irrigation tubing	19103
Geomorphology, see Geology.	
Geophysical Methods of Exploration Department, Leningrad University, work report	7041
Geophysical Prospecting Methods Department, Leningrad University, work report	10966
Geophysicists:	
employment outlook	9388
Ukrainian, work	21593
Geophysics:	
Air Force surveys in geophysics	7979, 13626-627, 16993, 19139
cold regions science and engineering	19653, 21278

	Entry
Geophysics—Continued	
earth's crustal structure studies in—	
Antarctic north of Novolazarevskaya station, USSR	6883
Siberia and Far East, USSR	6909
transition zone from Antarctic Continent to Indian Ocean	5202
field investigations (series)	21352
geophysical abstracts	3555
geophysics and space data bulletin	20967
instrumentation for research	65-66, 1737-39, 4254
magnetotelluric investigations in Georgia, USSR	14430
prospecting in Communist China	9361
radiological mechanisms for geophysical research, annual report	19240
Soviet and Chinese articles, English abstracts	3445
Soviet bloc research	4044
telluric bays and disturbances, USSR study	9323
USSR, research	1221
Georgalas, Helen M., relief	10377, 15443, 17199
George, Lawrence C., servomechanical system for measuring vapor pressure of metal halides	11327
George Washington Birthplace National Monument:	
colonial garden, general information	20663
general information	11465
George B. Kelez (Bureau of Commercial Fisheries research vessel): activation	4731
Georgetown Canyon, southeastern Idaho, geology	12504
Georgia:	
annual survey of manufactures, 1962, statistics for States, standard metropolitan statistical areas, and large industrial counties	6029
climatic summary, 1951-60, decennial census	19018
climatological data	3329
electric rate book	666
fishery products, wholesale dealers, lists	715, 18016
labor organizations, reporting, register	16571
landings, fish and shellfish	3556
annual summary, 1963	14263
mineral industry, minerals yearbook chapter	21697
municipal waste facilities, 1962 inventory	3104
municipal water facilities	18909
north, deer browse resources	8697
pecan production, economic aspects	17900
precipitation data, hourly	3578
public school finance program, 1962-63	2280
salt-water encroachment, geology, and ground-water resources of Savannah area	4808
sediment transported by streams	4812
Georgia Nuclear Laboratory, Dawson County, weathered crystalline rocks, infiltration and permeability	8753
Georgian Soviet Socialist Republic:	
economic progress	20256
magnetotelluric investigations	14430
Geothermal energy:	
geothermal power, economic evaluation	18670
steam deposits, issuance of leases, hearing	4586
steam, issuance of leases, report	17826

# JANUARY-DECEMBER

	Entry
Geothermal energy—Continued	
USSR, 2d all-Union geothermic conference	21540
Gerbils, red-tailed, autumn-winter migration in Boudag Mountain Ridge area, USSR study	12969
Gerdes, Ronald M., piloted motion simulator investigation of VTOL height control requirements	18777
Gerhard, C. C., limited evaluation of physical and mechanical properties of Nepal alder grown in Hawaii	18054
Geriatrics:	
aging, OTS bibliography	11661
orthopedics and traumatology problems, USSR study	20002
German language, labor terms	8835
Germanium:	
heated to temperatures in evaporation range, simultaneous contamination and conversion effects	5607
semiconductor materials, bulk resistivity measurement for electron devices, bibliography	21785
structural defects, USSR study	2810
sulfides, low-temperature heat capacities and entropies at 298.15° K	18694
Germanium fluorophlogopite, synthesis and properties	13119
Germanium oxide, system magnesium-magnesium fluoride-germanium-lithium fluoride	9515
Germany:	
Army area handbook	19212
Democratic Republic, see, below, Soviet Zone.	
East, see, below, Soviet Zone.	
Federal Republic—	
costume jewelry, U.S. export market	144
economic statistics, handbook	3564
Economics Ministry, research and development activities	5572
economy, basic data	6849
education, commission for educational exchange and financing programs, agreement	9820
foreign trade regulations	14379
gasification patents, index	18660
handwriting analysis and code of criminal procedure	10816
market for semiconductor devices	13740
market for U.S. electronic components	8102
new dimension in Atlantic partnership (address)	5698
patent rights and technical information interchange, agreement	18965
plant quarantine import requirements	9924, 19058
rehabilitation practices	5749
trade mission report, 1964	10707
U.S. status of forces, agreement	1603
Netherlands boundary, study	11622
Soviet Zone—	
biographies of political figures	18265
cybernetics in sciences, engineering and economy	5245
development of agricultural statistics, East Germany problems	10830
East European legal journals, abstracts	907, 953, 1119, 2788, 2831, 7094, 9173, 9273, 11035, 11174, 12663, 16074, 20257, 21535
8th German Peasant Congress, resolution	10923

	Entry
Germany—Continued	
Soviet Zone—Continued	
German Democratic republic in system of international socialist division of labor	16488
Institute of Length Measurements, organization, etc.	7204
passport laws, implementing regulations	1851
penitentiaries	5406
police and border troops of National Peoples Army, decree governing authorization and activity	11283
radiation accidents due to equipment damage or breakdown, organization of medical countermeasures against, study	18324
soldiers of chemical service, handbook, excerpts	20294
speech by Ulbrecht to FDGB congress	2702
West, see, above, Federal Republic.	
Germination:	
gallberry seed, some observations	18073
southern pine seeds repellent-treated, before and after storage	8668
Gerontis, Apostolos, and wife, relief	432
Gerontology:	
aging, OTS bibliography	11661, 13491
highlights of legislation on aging	11715
longevity and physiological old age, USSR study	19891
orthopedics and traumatology problems, USSR study	20002
Gerontology Branch, Public Health Service, pilot project contracts and cooperative agreements available	9884
Gerstein, Melvin, potential aircraft fuel tank vent fires and explosions caused by atmospheric electricity	7550
Gessner, Anne L., statistics of farmer cooperatives	17961
Gettysburg National Military Park, general information	16765
Getzendaner, C. W., European earwig	19079
Geyer, Anna M., relief	6244
Ghana:	
establishing business in	8820
foreign trade regulations	2457
students in U.S. oppose aid to Nkrumah	6518
Giamati, C. C., Fortran program for analysis of spin zero elastic scattering	9570
Gianino, Peter D., drastic reduction of warm-up rate within Dewar system by helium desorption	13639
Gibberellins:	
physiological activity, compared with activity, etc., of molecule, USSR study	20370
testing and application in cultured plants, instructions	20390
Gibbs, W. R., direct reaction calculation	7537
Gibson, James J., theory on visual perception, analysis of selected papers	15002
Gibson, O. Hoyt, sales management for manufacturers, bibliography	9767
Gibson, Robert C., relief	15661
Gibson, William A.:	
microorganisms in human gingival tissue	1748
simulation with carbon particles of bacterial invasion of human gingival tissues	8000

# INDEX 1964

	Entry
Gideon, D. N., exploratory studies of mechanical cycling fatigue behavior of materials for supersonic transport-----	11351
Giese, Fred P., titanium in southeastern United States-----	16624
Giffin, Jeannine, selling in Switzerland-----	21082
Gifford Pinchot National Forest: report 1962-----	2352
Spirit Lake & Mt. St. Helens recreation guide-----	2372
timber management plan, report-----	2373
Gift tax, <i>see</i> inheritance and transfer tax.	
Gifts:	
and bequests, acceptance by Secretary of Commerce for Department, authorize-----	
law-----	14919
reports-----	10403, 17628
expenses, rules for deducting from income tax-----	2448
holiday gift list for reader-----	20735
sending packages abroad, U.S. export regulations, summary-----	6122
Gigiyena i sanitariya (periodical): translations-----	18385
Gila County, Ariz., geology of Christmas quadrangle-----	19774
Gila River and Valley:	
basin, Indian Bend Wash, Ariz., flood control, engineer report-----	10489
departmental edition-----	10191
document edition-----	18955
summary of snow survey measurements, 1938-64-----	4137
water supply outlook and snow surveys-----	
Gilbert, A., mechanical properties of chromium, chromium-rhenium, and derived alloys-----	21731
Gilbert, Arnold, health needs of migrant children in Kansas day-care program-----	9717
Gilbert, C. R., hydrologic studies of small watersheds, Honey Creek basin, Collin and Grayson Counties, Tex., 1953-59-----	15967
Giles, Robert E., remarks, Feb. 14, 1964-----	7425
Gill nets, <i>see</i> Fish nets.	
Gilmore, Volt:	
remarks-----	
Jan. 22, 1964-----	5739
Jan. 27, 1964-----	5740
Gilpin County, Colo., altered wall-rocks in central part of Front Range mineral belt-----	4795
Gin notes, <i>see</i> Motes (in cotton).	
Gingival tissues, <i>see</i> Tissues.	
Ginning, <i>see</i> Cotton gins and ginning.	
Ginseng:	
growing-----	19071
study, USSR symposia-----	2560
Girders, welded steel electronic computer program for analysis and design-----	13426
Girl Scouts of America:	
military equipment for 1965 Senior Roundup encampment-----	
law-----	17291
reports-----	13945, 15728
report, 1963-----	13922
Girls:	
mentally retarded, experimental training programs by nurse educators-----	13785
vim, exercise plan-----	11540
who are disadvantaged girls 16-21 years old?-----	16926
Gittlin, Joseph N., population exposure to X-rays, system to obtain data-----	11555

	Entry
Glacial period:	
bedrock valleys of New England coast as related to fluctuations of sea level-----	19787
lake deposits in Western States, review and annotated bibliography-----	15940
reef-associated limestones of Pleistocene age-----	14340
water in Pleistocene aquifers, Nassau and Queens Counties, N.Y.-----	6816
<i>see also</i> Quaternary period.	
Glaciation, Little Cottonwood and Bells Canyons, Wasatch Mountains, Utah-----	15950
Glacier Peak Wilderness Area, general information-----	2353
Glaciers:	
deposits, Puget Sound lowland and foothills of Cascade Range, study-----	809
ice sheet elevations of southern Greenland-----	8515
ice sheet fringed by mountain ranges, profile and heat balance at bottom surface-----	19649
morphology and hydrology of glacial stream-----	4791
quaternary, advances and recessions, and their relations to rises and falls of Lake Bonneville, study of sequences-----	15950
rate of growth or shrinkage of non-equilibrium ice sheets-----	19651
shear zones in ice cap margin, Thule, Greenland-----	12343
Glade oil reservoir, hydraulic fracture treatments-----	14753
Glandular research, USSR-----	8877
Glass, Andrew C., statistical summary of 1962 inventory municipal waste facilities in U.S.-----	15068
Glass:	
absolute viscosity, penetrometer for measuring-----	7438
fibrous glass, 1963, current industrial reports-----	10052
flat, current industrial reports-----	3391, 6042
glassy state, USSR studies-----	14635
inorganic, structure, 4th all-Union conference, USSR report-----	20265
window glass from USSR, determination of no injury to U.S. industry-----	20851
<i>see also</i> Glass fibers--also names of manufactured articles and materials.	
Glass fibers:	
fiberglass boat building, USSR study-----	16253
fiberglass-reinforced sandwich structure for airframe use, research-----	20857
glass plastics in furniture and decoration, USSR industrial development, translation-----	16252
plastic laminates, fibrous glass reinforced, Ships Bureau inspection manual-----	16854
errata-----	20780
plastics reinforced, test data, helicopter rotor blade applications-----	13495
surface treatments, theories and Navy research-----	13349
unwoven, for reinforcement of plastic laminates in flexure, evaluation methods-----	12445
unwoven, plastic laminates reinforced with, evaluating shear strength-----	18052

	Entry
Glass fibers—Continued	
vinyl-coated insect screening and louver cloth, standard of trade	11430
Glassett, Charles H., Jr., relief	15466, 19385
Glassman, Arthur J.:	
Brayton cycle analytical studies for space-power system applications	20610
expansion and condensation behavior of alkali-metal and mercury vapors flowing through nozzles	18789
Glassstone, Samuel:	
controlled nuclear fusion	13723
effects of nuclear weapons	17065
Glassware, pressed and blown, current industrial reports	10057
Glassy state, USSR	14635
Glaucoma, hope through research	1558
Glaziers, employment outlook	9421
Gleeson, Geraldine A., impairments due to injury by class and type of accident	5666
Glen Canyon National Recreation Area, general information	18827
Glick, Marvin:	
occupational wage survey—	
Green Bay, Wis.	1381, 20441
Kansas City, Mo.-Kans.	9459
Milwaukee, Wis.	14698
Omaha, Nebr.-Iowa	7403
South Bend, Ind.	14694
Glidden Company, Lakehurst Mine, exploration and pilot plant testing of limenite-bearing sands	2981
Gliders (aircraft):	
design of sailplanes for optimum thermal soaring performance	7502
parawing towed air cargo delivery system, dynamic stability	16682
Glomerulonephritis, selected references	15043, 18918
Glossaries:	
fabric imperfections, Federal standard	19710
heart terms	11446
Latin American press abbreviations	18542
nuclear terms	11876
standardized terms and definitions, Air Force manual	7973
statistical bulletin of National Bank of Yugoslavia	9290
stratigraphic terms	8771
Glottis, logical techniques for glottal source measurements	19159
Glover, Fred A., waterfowl status report, 1963	8625
Glover, Robert E.:	
computations of drawdowns caused by pumping of wells in Fountain Valley, Colo.	12516
dispersion of dissolved or suspended materials in flowing streams	4794
ground-water movement	9744
Gloves, current industrial reports	11895
Glucose:	
oral, cortisone-supplemented, tolerance responses	19186
oral tolerance responses in males as to caries experience and periodontal status	4260
postprandial serum levels and fasting as related to periodontal status and caries experience	19181
tolerance test of adults, United States, 1960-62	11585
Glude, John B., survey of Japanese research on shellfisheries and seaweeds	10555

	Entry
Glue:	
animal, current industrial reports	3390, 8111
control of conditions in gluing with protein and starch glues	14316
experiments in gluing southern pine veneer	12451
Glushkov, V. M., portrait of cyberneticist	16393
Glutamate, effects of arginine, l-glutamate, and pyridoxine on toxicity of aerosol	19182
Gluten, vital wheat, from Canada, determination of no injury or likelihood thereof to U.S. industry	11655
Glycoproteins, trypsin and ovomucoid in mixed films, force-area study	20710
Glycosides, cardiac experiments with olitoriside and corchoroside, USSR study	12664
Gnoseology:	
Marxist-Leninist, and problem of sign and meaning, USSR study	5139
nature of information modelling, USSR study	2886
Goat Rocks Wild Area, general information	2354
Goddard, Brent B., development of aircraft investigations of squall lines from 1956-60	11693
Goddard, Grover C., Jr., water-supply characteristics of North Carolina streams	2435
Goddard, Robert H.:	
commemorative 8-cent airmail postage stamp—	
poster	20726
unveiling of design (address)	20723
memorial statue, erect, hearings	4510
Goddard Space Flight Center:	
contributions to COSPAR meeting, June 1963	14854
early years, historical origins and activities	7465
general information	7466
satellites and sounding rockets, projects summary	13137, 18716
Godin, Alfred J., review of literature on mountain beaver	10578
Godrey, Horace D., remarks, Jan. 20, 1964	7905
Goetz, Robert C., flutter characteristics of delta-planform surfaces at Mach number of 15.4	14888
Gogel, Walter C.:	
perception of depth from binocular disparity	4313
size cues and adjacency principle	13730
visual perception of spatial extent	5996
Golter, toxic, glandular research, USSR study	8877
Gold:	
domestic mining industry, Interior Dept. to study, hearings	534
exploration, financial assistance (remarks)	1396
films, vacuum performance of ball bearings lubricated with	13232
Industries, USSR, activities	2656
mine production, report, monthly	3557
minerals yearbook chapter	21689
mining industry revitalization act—	
hearings	534, 4587
report	2222
ores and concentrates, marketing in U. S.	13105
production and consumption, report, 1962	9529
United States movements	4123, 6051
vacancy formation under high pressure	14894



# INDEX 1964

	Entry		Entry
Gold (money):		Gottlieb, Sylvia B., statement, Dec. 28, 1963	2974
foreign gold and exchange reserves, current situation and long-term trends	14175	Gould, Augustus A., recent mollusca, illustrations of types described, etc.	14962
gold and dollar reserves, foreign	12319	Government:	
Mint Bureau report, 1963	9529	American Federal system, improve effectiveness, role of Advisory Commission on Intergovernmental Relations	16929
Treasury and Federal reserve foreign operations and gold pool	8588	census 1962—	
United States reserves, defend by promoting increased foreign investment in U.S. corporate securities and increased foreign financing for U.S. corporations abroad	11538	announcement and order forms	4340, 11884-885, 19282-283
Gold Procurement and Sales Agency, establish, hearings	534	county, finances	11890
Golden eagles, <i>see</i> Eagles		final reports	4344, 11889-890, 15305, 19285-287
Goldfarb, P. M., instruction manual, glass reinforced plastic coating for propeller shafting	9763	publication program, list	13771
Goldfeld, S.:		topical studies	19287
computation of high-rate tensile strength of plastics from static strength data	10482	Census Bureau publications, recurrent reports scheduled, 1965	15304
plastic fibrous reinforcement for Portland cement	14201	census publications, price list	13389
Goldman, Aaron, testimony, hearings	10438	Constitution and Government, Federal textbook on citizenship	18158, 19810
Goldstein, Harold:		Federal—	
paper, Apr. 25, 1964	13087	automatic data processing equipment use inventory, 1964	15600
testimony, Sept. 26, 1963	1388	information plans and policies, hearings	401
Goldstein, Philip:		interests in group health practice	11554
occupational wage survey—		medical and health-related program, special analysis	142
Allentown-Bethlehem-Easton, Pa.-N.J.	13068	needs best fulfilled by (address)	15023
Philadelphia, Pa.-N.J.	9464	organization for conduct of educational programs, annotated bibliography	141
York, Pa.	13062	organizations measuring productivity	19273
Gomes, John M., electrolytic extraction of tungsten from western scheelite	18695	paperwork jungle, hearings	14014, 15599
Gonads, female, of Coelenterate polypodium hydriforme, cytomorphological study, USSR	1153	patent policies, latest developments (remarks)	13831
Gonionota melobaphes Walsingham, restriction, with descriptions of new species	9650	role toward building Greater Society (address)	15022
Gonloterma, <i>see</i> Moths		scientific and technical information, status, report	8541
Gonzales, Leopardo L., relief	10375, 2110	use of polygraphs as lie detectors—	
Goodman, Kenneth V., soil survey, Penobscot County, Maine	7744	hearings	10315, 14003, 15588
Goodpaster, Andrew J., nomination, hearing	6406	preliminary study	8384
Goodsell, Wylie D., farm costs and returns, commercial farms by type, size, and location	13582	women in high-level elective and appointive positions	5765
Goodwin, Robert C., address, Feb. 10, 1964	6585	finances, compendium, census of governments, 1962	19286
Goodwin, Thomas C.:		announcement and order form	19282
laboratory-industrial cleaning techniques and materials	14167	government and science—	
lubricants and lubrication, report bibliography	15833	hearings	4509, 17665
Googins, Helen J., relief	6235	statement of purpose	4508
Gordon, Gerald F., market for automatic vending machines in United Kingdom	143	governmental finances in United States, 1963	11909, 17111
Gordon, Mackenzie, Jr., California carboniferous cephalopods	15951	how Government measures unemployment	9472
Gordon, Tavia:		industry and government, partners in progress (addresses)	7924, 8093
blood pressure of adults by age and sex, U.S., 1960-62	15071	interlocal governmental cooperation, bibliography	5841
blood pressure of adults by race and area	16846	local—	
glucose tolerance of adults, United States, 1960-62	11585	adaptation to changing urban needs, metropolis in transition	831
heart disease in adults, United States, 1960-62	18926	Federal contributions available for civil defense	15342
Gordon, William A., determination of less than 10 parts per million carbon in tungsten	21754	organization and planning, impact of Federal urban development programs	14139
Gorgas Memorial Laboratory, report, 1963	4437	metropolitan areas, approaches to organization (paper)	15971
Gor'kiy Milling Machine Plant, improvements and innovations	5159	municipalities and township, finances, census of governments, 1962	15305
Goshen, Edw. E., remarks, Nov. 12, 1963	87	announcement and order form	21025

	Entry
Government—Continued	
operations, improving, GAO findings and recommendations, 1963—	
departmental edition—	8709
document edition—	10173
our Constitution and Government, Federal textbook on citizenship—	18158, 19810
our Government, Federal textbook on citizenship—	18157
our Government, troop topics—	8033
provision for quarters, furniture, etc., to civilian employees, clarify authority, report—	12078
science and distracted scholar (remarks)—	134
services, user charges required by prescribed Government policies not assessed against recipients, Federal Aviation Agency, GAO report—	8708
speaks to business (address)—	13823
State—	
education directory, 1963-64—	6562
Federal contributions available for civil defense—	15342
finances, summary, 1963—	8139
regulation of foods and related products, report—	358
State and local—	
continuity, constitutional amendment to assure, explanation—	19646
short-term cash balances, interest bearing U.S. Government securities available for investment—	1637
tax revenue— 1824, 8138, 13772, your Government, Defense Dept. pamphlet—	19307
see also Intergovernmental relations—Military government—also headings beginning Government.	90
Government buildings, see Public buildings.	
Government contracts:	
Air Force research contracts, negotiation and award, case study—	
hearings—	6343
report—	8366
code of Federal regulations—	8558-59
conservation reserve program and land use adjustment program, statistical summary, 1963—	9028
contract and subcontract work—how obtained by small businesses—	1579
small business qualifications—	3126
cost-type and incentive-type contracts held by Grumman Aircraft Engineering Corp., improper charges to Navy Dept., GAO report—	10601
Davis-Bacon act—	
amend—	
hearing—	8452, 21205
law—	13897
reports—	2047, 8413
legislative history—	10307
defense contracting, avoiding conflicts of interest, report—	354
defense procurement, trends, 1958-62—	12302
discrimination in employment on basis of age by Federal contractors, etc., Executive order against—	14669
economic impact of Federal supply and service activities, report—	17441
evaluation of contractor's calibration system, handbook—	19616

	Entry
Government contracts—Continued	
excessive relocation payments to employees transferred from one company location to another by Lockheed Missiles & Space Company, Sunnyvale, Calif., Defense Dept. and NASA, GAO report—	12490
Federal Aviation Agency, ineffective administration of contracts for rental of machines, GAO report—	12489
fixed equipment in Federal buildings, contracts for inspection, etc., report—	6462
Grand Valley Water Users' Association, repayment contract, modify, report—	4525
highway construction contracts for Federal-aid programs in areas of substantial unemployment—	9996
housing, etc., for employees of contractors—	
hearing—	12151
law—	17318
reports—	4549, 12078
identical bidding in public procurement, report of Attorney General—	20422
illegal payment provisions and other deficient contracting practices employed by United States Travel Service, GAO report—	10599
incentive contracting guide—	6544
military procurement and supply, economic aspects, 1964—	8237
military services—	
cost of morale and recreation benefits for defense contractor employees—	21200
hearings—	17632
equal employment opportunities—	
hearings—	8394
report—	8336
NASA industrial property control manual—	7474
NASA procurement directive—	16663
NASA procurement regulations—	9538
Navy contract clause book, firm fixed-price supply contracts—	13489
negotiated fixed-price, unnecessary costs of insurance on inventories, etc., held by Defense Dept. contractors, GAO review—	19767
procedures, statement of Hyman G. Rickover, hearings—	2104
procurement of property and non-personal services by executive agencies, amend Federal property and administrative services act of 1949, report—	12222
renegotiation act of 1951, as amended—	21863
renegotiation act of 1951, extend—	
law—	13888
reports—	8348, 10222, 14055
renegotiation bulletin—	18930
renegotiation, concurrent—	18930
renegotiation rulings—	7720, 11595
selling to NASA—	11425
small business participation in Government procurement, 1963, conference—	12283
subcontractors' claims, conference with Defense Dept. representatives, etc.—	2248
synopsis of proposed procurement, sales, and contract awards—	3339
termination, etc., Navy administration manual—	5625, 9685

# INDEX 1964

Entry	Entry
Government contracts—Continued	Government offices—Continued
TFX contract investigation, hearings	general Government matters, appropriations, 1965—
transportation of mail, modernize laws—	continue, report
hearing	law
law	report
report	Government agencies engaged in international activities
value of prime contracts awarded in ARA redevelopment areas, 1963	Government organization manual, 1964-65
water supply contracts, repayment, compilation	GSA services available
print as Senate document, report	independent offices, appropriations, 1964—
Westlands water district contract for construction of water distribution etc., system in San Luis unit, Central Valley project, Calif., hearing	hearings
	law
	reports
	independent offices, appropriations, 1965—
Government documents, see Government publications.	hearings
Government employees, see Government officials and employees.	law
Government employment, see Employment.	reports
Government news from anonymous sources	information availability, etc., progress of study Sept. 1961-Dec. 1962, report
Government occupations, employment outlook	interagency coordination, economy, and efficiency, expenses, report
Government of District of Columbia, see District of Columbia.	interagency coordination in environmental hazards, hearings
Government offices:	print additional copies, reports
accounting policy and procedures, GAO guidance manual	interagency growth studies program (remarks)
accounting principles, etc., and internal auditing guidelines, GAO guidance manual	interagency motor pool system for use of Federal agencies, guide
accounting systems, submissions for GAO approval, hearings	interagency training programs
administrative practice and procedures, investigations—	joint financial management improvement program, progress
authorization, report	1948-63
expenses, report	licensed attorneys' automatic admission to practice before Federal agencies, report
report	managing noncurrent files, Federal records centers
appropriations, 1964, supplemental, proposal	manpower management plans, etc., improvements, 1963
claims settlement by Federal agencies—	manpower utilization in Federal Government, symposium
law	meteorological research and development, current activities
report	nuclear education, interrelated role of universities and Federal agencies, conference proceedings
commercial long distance calls, unnecessary costs to Government made between cities served by Federal Telecommunications System, GAO report	organization of Federal executive departments and agencies—
credit programs, study	chart
defense agencies, appropriations, 1965, military construction, hearings	committee print
disposal of waste water at Federal installations, report	report
drug policies, interagency coordination, hearings	policies and procedures, General Accounting Office guidance manual
electronic computers, regional sharing plan in Philadelphia, Pa., area	2398-2400, 6753-54, 8704, 10591, 12486, 21331.
executive agencies, procurement of property and nonpersonal services, amend law, report	provision for quarters, furniture, etc., to civilian employees, clarify authority—
executive branch—	hearing
appropriations and limitations in 1965 budget, reduction proposals	law
appropriations, 1964, supplemental, proposals	report
appropriations, 1965, proposal	quality assurance provisions for NASA installations
appropriations, 1965, supplemental, proposals	records and papers, disposition, reports
appropriations, 1966, proposal	2043, 4463, 4481, 6294, 8293, 8333, 10207, 10214, 12051, 12074, 13931, 15488, 15499, 17593, 17620, 19462.
Federal services to help communities plan with youth	reductions in force in Federal agencies
general Government matters, appropriations, 1964, law	reimburse owners, etc. of land acquired by Federal projects for moving expenses, report

# JANUARY-DECEMBER

	Entry
Government offices—Continued	
reorganization, see, in main alphabet, Government reorganization plans.	
research and development programs, hearings	6357, 10316
print additional copies, report	6317
scientific information activities	1515-17, 3069, 5573, 7621-23, 11475
service contract act of 1963—	
hearings	12127
report	12112
small business procurement practices and programs, hearings	12155
statistical activities, personnel, equipment, costs, report	6276
survey of selected activities, report	4452
transportation, GAO guidance manual	3552
vouchers, statistical sampling procedures in examination, permit—	
hearing	12136
law	17380
reports	15534, 17745
winning cold war, U.S. ideological offensive, hearings	8382
see also Government supplies.	
Government officials and employees:	
Alaskan duty, transportation of private motor vehicles—	
law	6177
report	4547
appeals, functions of hearing committee members conducting hearings, guide	17139
back pay act of 1963, hearing	6520
challenges and rewards of service (address)	11936
claims settlement by Federal agencies—	
law	17416
report	17744
compensation act, amend to permit services of chiropractors, hearing	17885
cost-of-living allowances, terminating, hearings	10342
Defense Department labor cost, control, hearings	17661
dual compensation-dual employment laws, modernize—	
hearing	6523
law	17307
reports	331, 6279, 6485
statement of purpose, etc.	12152
employee conduct	15081
employment and payrolls, monthly release	4050
erroneous overpayments, waiver collection, report	15509
Federal employee facts	10103-104, 11945, 17135
Federal employment—	
monthly report	3744
statistics bulletin	3466
Federal news clip sheet	3481
Federal personnel, bimonthly statistics	3211
fees, salaries, or compensation, jurisdiction of district courts over actions to recover—	
law	17378
reports	15501, 17734
financial protection	11945
fringe benefits, supervisory training course	20796
group life insurance act of 1954, amend with regard to filing designation of beneficiary—	
hearing	6521
report	17790
health benefits act, amendments—	
law	8223
reports	469, 6286

	Entry
Government officials and employees—	
Continued	
health benefits act and life insurance act, extend coverage to United States commissioners—	
hearings	10338
law	17390
reports	12080, 17795
incentive awards program	17135
income, etc., filing annual reports, hearings	14156
interagency training programs	6098, 13804
manpower utilization in Federal Government, symposium	17662
medical facilities available to injured in performance of duty under Federal employees' compensation act	15861
orienting new employees in Indian Affairs Bureau	835
pay checks drawn in favor of banks, etc., for credit of Federal employees' accounts, authorize, hearing	19508
pay levels, increase, letter from the President	8250
political activity—	
Hatch act, revised text	10357
print as Senate document, report	8430
legal restrictions	10108
rules for Federal employees	10103
position-classification standards	3853
postal employees, instructions and information	3855
reductions in force in Federal agencies	10109
reemployment rights for those who perform duty in Armed Forces	15359
retired, accept and wear decorations, etc., from foreign governments, reports	17474, 21235
retired, health insurance program, act of 1960, administrative expenses, hearing	8454
retirement credit and fringe benefits for Federal-State service, hearings	15601
retirement systems, State and local employees contributions, benefits, and beneficiaries, calendar years 1957-63	13455
salaries—	
report of advisory panel	2119
review of acceptable level of competence and quality increase features of Federal salary reform act of 1962	10341
salary act of 1963—	
reports	340, 6320
statement of purpose, analysis, etc.	2120
salary act of 1964—	
amend act to provide pay increases be made retroactively effective in case of employee whose pay is established through administrative action—	
law	21123
reports	17794, 19461
hearings	12279
law	17285
reports	10259, 12058, 14071, 15522, 15537
salary classification laws, compilation	21160
State agencies, scientific and technical personnel, employment in 1962	14705
State and local, full-time, coverage by group life insurance and health or hospital insurance, Oct. 1962	20800



# INDEX 1964

	Entry
Government officials and employees—	
Continued	
trades and crafts, employment opportunities	13805
unemployment compensation, appropriations, 1964 supplemental—	
law	8234
report	8416
unemployment compensation by industry and State	8434
United States ideological effort and relationship to foreign policy, study	12132
United States personnel security practices, appendix, departmental rules and regulations, hearings	12277
voluntary pay roll savings plan for purchase of U.S. savings bonds	9860
work injury facts, 1937-62, rates and costs of injuries, by establishments, 1937-62	8497
work injury facts, 1962, number, duration, etc., reported under Federal employees' compensation act	4655
see also Civil service pensions—	
Conflict of interests—Government offices—also names of departments, etc., where employed.	
Government Operations Committee, House:	
activities, interim report, 1963	4498
calendar	3649
committee prints	4498
8384, 12134-135, 19509-510	
hearings	400-402,
2113, 6356, 8383, 10314-315,	
12133, 12136, 14001-4, 15587-	
588, 17648-652, 19508.	
investigations and studies, expenses, report	6311
recommendations made during 87th Congress, results	12135
reports	353-358,
4452, 6291, 12054-55, 15524,	
15527-528, 15531, 15534, 21187	
Government Operations Committee, Senate:	
calendar	3669
committee prints	2238,
4583, 6509, 8447, 10421, 10423,	
14138-139, 17877, 19599.	
hearings	531-533,
2239, 4584, 6508, 6510-11, 8444-	
45, 10420, 10422, 15807, 17878,	
19598, 19600, 21239.	
investigations and studies—	
interagency coordination, etc., expenses, report	6445
intergovernmental relations, authorization, report	6446
national security operations, authorization, report	6447
Permanent Subcommittee operations, authorization, report	6444
organization chart of Federal executive departments and agencies	8446
reports	4524,
4626, 4542-43, 4547-49, 6462,	
8415, 8419, 12219-222, 14076,	
17704, 17745-747, 19584.	
Government periodicals, see Periodicals.	
Government Printing Office:	
appropriations, 1964, legislative—	
law	1976
report	237
appropriations, 1965, legislative—	
hearings	8365, 15794
law	17313
reports	8334, 15537, 15699

	Entry
Government Printing Office—Con.	
audit report, 1963	10593
printer proofreader, examination announcement	8169
salaries, allotment and assignment of pay to cover union dues and State income tax, extend act to cover—	
hearing	10334
report	12081
Government property, see Public property.	
Government publications:	
big step along road to knowledge, list	9706
classified list	11543
displayed at U.S. pavilion, New York World's Fair	15039
documents having general legal effect, preliminary inventories	9629
exchange agreement with Norway	20829
how to obtain	13075
hunting for facts?	1548
monthly catalog	3731
popular publications available from Supt. of Documents	11545
price lists, Public Documents Division, PL series	1550-53,
3093-95, 5642-43, 7683-86, 9709,	
11546-547, 13387-390, 15036,	
16824-827, 18880-888, 20736-738, 21838-842.	
publications management, naval establishment	5627
selected, list (periodical)	4030
State publications, monthly checklist	8732
subscription services, price lists	5642
technical reports, keywords index, semimonthly	3632
when digging for facts uncover government publications	5644
see also Numerical lists and schedules of volumes of reports and documents—also names of departments, etc., issuing publications—also subjects.	
Government regulation and control, public policy on administered prices, hearings	537
Government reorganization plans:	
act of 1949, extend—	
law	13899
report	12220
Public Health Service, hearings	17655
Government Research, Select Committee on, House:	
committee prints	6358, 15589, 19511
hearings	6357, 10316
report under House resolution 504, extend time, report	15539
reports	6287, 15575, 19474
Government securities:	
direct purchase by Federal reserve banks, extend authority—	
hearing	13996
law	13893
reports	12092, 14059
United States interest bearing securities available for investment of short-term cash balances of local and State Governments	1637
yields and prices	4102-3
see also Treasury notes.	
Government supplies:	
brand name procurements by FSS, GAO report	12494
common shipping faults and their remedies	1635
economic impact of Federal supply and service activities, report	17441

	Entry
Government supplies—Continued	
Federal item identification guides for supply cataloging—	
abbreviations and symbols—	8465
alphabetic index of names—	8463
description patterns—	12288-297
numeric index of description patterns and item name codes—	8464
supplements—	3468-78
Federal manual for supply cataloging—	
format and content—	10444
operating procedure—	21249
Federal procurement regulations—	
FPR circulars—	3485, 19770
FPR notices—	3486
Federal specifications—	686,
2328, 4721, 6689, 8589, 10546,	
12406 14239, 15906, 17991,	
10709, 21314.	
Federal specifications and standards, index—	6693
Federal specifications, standards, and handbooks, index, supplements—	3585
Federal standards—	687-689,
2329-31, 4722-24, 6690-91,	
12407-410, 14260, 10710-712.	
Federal stock number reference catalog—	4725
Federal supply catalogs—	4601,
14161, 15829-830	
format and content, cataloging manual—	10444
Federal supply classification, directory and planning schedule of class and area assignments—	2256,
6552, 12306,	17898
Federal supply classification handbook—	
alphabetic index, supplements—	3495
groups and classes, change sheet—	558
numeric index, addendum—	3493
numeric index, supplements—	3494
Federal supply code for manufacturers—	
excluding United States and Canada, supplements—	3497
United States and Canada—	
code to name—	2251
code to name, supplements—	3498
name to code—	559
name to code, supplements—	3499
Federal test method standards—	8590,
15907, 17992	
NASA procurement directive—	16663
NASA procurement regulations—	9538
Navy procurement directives—	13368
revisions—	3781
Philadelphia Naval Shipyard, increased costs in supply management, GAO review—	18090
procurement, role of small business, 1964, hearings—	21244
selling to NASA—	11425
small business procurement practices and programs, hearings—	12155
stores stock catalog—	4059, 21315
supplements—	690, 6694
synopsis of proposed procurement and sales contract awards—	3339
uneconomical management of commercially available items within Defense Dept. GAO report—	2405
see also Military supplies—Surplus property.	
Governors' commissions on status of women—	7864
Gown of Mrs. John F. Kennedy—	1583

	Entry
Grabber, Oleg, Ars orientalis—	4751
Grabert, George A., relief—	17492
Grace, J. L., jr.: operating forces on miter-type lock gates—	14213
spillway for Amistad Dam, Rio Grande, Mexico and United States, hydraulic model investigation—	19002
spillway for typical low-head navigation dam, Arkansas River, Ark—	21282
spillway structure for central and southern Florida water-control project—	642
Graders, agricultural commodity (fruit, etc.), examination announcement—	15361
Gradients (mathematics): magnetic field in solar photosphere—	7564
Grading of commercial products, see names of products.	
Graduates:	
advanced students grants for study, research and summer seminars abroad in modern foreign languages, 1964-65—	4622
college, careers through Atomic Energy Commission's Internship and training programs—	19259
field instruction for schools of social work, guide—	13533
financing graduate education—	14184
high school and college graduation age, 1960 and 1950—	1820
high school, employment in 1963—	14709
trends in graduate enrollment and Ph. D. output in scientific fields at 100 leading institutions, 1961-62 and 1962-63—	20651
Graft House: acquire for Independence National Historical Park—	
hearing—	14144
law—	17336
reports—	4453, 15736
Grafting (physiology): autogenous bone transplants in treatment of osseous defects—	15242
bone grafting, Soviet studies—	16397
bone marrow transplantation problems in radiation affections, USSR study—	16028
new break in barrier of tissue incompatibility, USSR study—	21412
vascular and bone grafts, USSR articles—	20175
Gragg, Donald B., using mark-sense cards for collecting occupational information—	15233
Graham, Donald P.: dwarfmistletoe survey in western Montana—	14317
what is known about disease potential of wind-thrown timber—	2396
Graham, Julia, economy of Republic of Mali—	8824
Graham Burke pumping plant: designate—	
hearing—	21211
law—	21138
reports—	17753, 19467
Grain:	
bulk cargoes, rules and regulations, cereals, etc., trade agreement with Great Britain—	15117
coarse, U.S. exports under Government programs, 1962-63—	14290
culture, etc., publications, price list—	16825

# INDEX 1964

	Entry		Entry
Grain—Continued		Grand Forks, N. Dak., petroleum stor-	
feed grain—		age facility, excessive prices,	
foreign trade prospects-----	8629	GAO report-----	19755
program, 1963, statistical sum-		Grand Island, Nebr., aircraft acci-	
mary-----	7906	dent-----	13789
program, 1964-----	5852	Grand Junction, Colo.:	
program, problems, etc. (re-		land, convey by quitclaim deed—	
marks)-----	1712, 1714, 1716	law-----	19411
sales to Soviet bloc, benefits to		reports-----	10243, 17767
U.S. (statement)-----	1639	Grand jury, see Indictments.	
fertilizers for grain crops, USSR		Grand Portage National Monument,	
study-----	12877	general information-----	14969
foreign agriculture circular-----	3520	Grand Prairie, Tex.:	
hard winter wheat area, receiving		airport, relocate—	
grain at country elevators-----	5834	hearings-----	404, 12256
inspection points under grain stand-		law-----	13906
ards act, list-----	7887	reports-----	345, 12218
market news—		Grand Prairie region, Ark.:	
quarterly summary and statis-		artificial recharge of ground water	
tics-----	3559	(series)-----	816-817, 4809
weekly summary and statistics--	3560	ground water, studies of artificial	
production, increasing in Tadzhiki-		recharge, environment and	
stan, USSR study-----	10882	history-----	816
protection of grain products from		hydrogeology-----	4809
radioactive chemical, and bacter-		Grand Rapids, Mich.:	
ial substances discussed,		Cuban refugee problem, hearings--	2242
USSR study-----	14591	Michigan National Bank to operate	
purchase of processed food products		and establish branch offices,	
by CCC, permit—		hearing-----	19593
law-----	17408	Grand River and Valley:	
reports-----	17764, 21191	chemical quality of surface waters,	
Research Institute for Grains		and sedimentation in drainage	
and Industrial Crops Rumania,		basin, N. and S. Dak-----	18148
activities-----	9124	flood control at Grandville, Mich.,	
screenings, prohibit importation,		engineer report—	
report-----	21190	departmental edition-----	615
small, chinch bug control-----	19083	document edition-----	278
standards, official, United States--	11739	Grande Ronde River and Valley,	
statistics supplement 1963-----	7946	upper, Union County, Oreg.,	
stocks—		geology and ground water re-	
in all positions, quarterly report-	4056	sources-----	8776
in deliverable position at Chicago,		Grand Teton National Park, general	
Ill-----	4057	information-----	16766
reduce surpluses (remarks)-----	23	Grand Trunk Western RR., accident-	6870
storage operations of Billie Sol		Grand Valley Water Users' Associa-	
Estes, Agriculture Dept. hand-		tion, repayment contract, mod-	
ling—		ify, report-----	4525
hearings-----	14001	Grandone, Peter, mineral industry of	
report-----	19509	Louisiana-----	2985
toxic effect of molds on, USSR		Grandville, Mich.:	
studies-----	14523	Grand River flood control, engineer	
trade in futures-----	4089	report—	
see also names of grains.		departmental edition-----	615
Grain boundary creep, see Creep of		document edition-----	278
metals.		Granger, H. C., stratigraphy of Drip-	
Grain elevators:		ping Spring quartzite-----	8758
country—		Granite, explosives, determination of	
loading boxcars in hard winter		detonation properties, compara-	
wheat area-----	19088	tive studies-----	13114
receiving grain in hard winter		Grano, Charles X., growing loblolly	
wheat area-----	5834	and shortleaf pine in mid-	
selecting best capacity truck re-		South-----	19067
ceiving facilities-----	13592	Grant, Frederick C.:	
Grain sorghum, see Sorghum.		flank losses, effects in theory of	
Grainger, E. H., asteroleia of the Blue		space-probe entry under condi-	
Dolphin expeditions to Lab-		tions of high mass loss-----	1469
rador-----	7599	space-probe entry under conditions	
Grams, Armin, directory of specialists		of high mass loss-----	7558
in parent education-----	1828	Grant, M.M., Explorer XVII (1963	
Gran Quivira National Monument, ex-		9A) real time PCM telemetry	
cavations in 17th century Juma-		data processing and display	
no Pueblo, Gran Quivira-----	20660	test stand-----	13239
Grand Canyon National Monument,		Grant, Murray, countywide screening	
Bridge and Marble Canyon		programs for chronic disease--	13395
Dams relationship-----	18929	Grantham, John B., lumber yield and	
Grand Canyon National Park:		log values of Shasta red fir-----	789
Bridge and Marble Canyon Dams		Grants-in-aid:	
relationship-----	18929	accident prevention, PHS research	
general information-----	18828	grants-----	7700
Grand County, Utah, geochemistry of		references to publications-----	7701
rocks and related soils and		aged, community planning, etc.—	
vegetation, Yellow Cat area--	21351	hearings-----	395
Grand fir, see Fir.		report-----	12096

# JANUARY-DECEMBER

	Entry
Grants-in-aid—Continued	
air pollution control—	
law	1935
law, description	4825
program under clean air act	11548
reports	382, 465
airport program, extend time for making grants—	
law	8219
reports	381, 2074, 6297
airports, Federal aviation regulations	4682, 6621
Alaska earthquake grants, authorize—	
law	12006
reports	10280, 10404
Alaska reconstruction grants—	
hearing	14140
law	17310
reports	13953, 14067, 15556
arts encouragement—	
hearings	13998
report	2215
awarded by N.I.H., 1963, index	11451-452
cerebrovascular disease research	18814
civil defense, Federal contributions available to State and local governments	15342
Community Health Services Division of PHS, research program	11574
community health services for chronically ill and aged, PHS project grants program	15166
community renewal programs, Federal aid available	1647
disaster relief, summary of allocations, report	8251
disaster road program, amend U.S. Code—	
hearing	15820
law	21150
reports	17720, 19488
documentary source material on U.S. history—	
hearing	10422
law	17242
report	12221
education—	
deny federal assistance to institutions practicing racial discrimination, hearing	2110, 6514
disaster areas, provide, hearings	17884
federally affected areas, assistance—	
hearings	396, 17884, 19502
law	21157
report	15732, 19483
graduate students, teachers, and professors for summer seminars in modern foreign languages	4622
higher education facilities act, law	1933
inadequacies in administration, GAO report	4763
national defense education act of 1958—	
amend, hearings	19506
counseling and guidance training institutes program, policies and procedures manual	14191
extend and amend law—	
hearings	17646
law	21157
reports	15530, 15732, 17575, 19483
new media, projects initiated under title 7	6576
research projects under title 7, title 3, questions and answers	17928, 15855
professional nurse, construction of teaching facilities, hearings	10325

	Entry
Grants-in-aid—Continued	
education—Continued	
students in higher education, directory of federally financed student loans, etc.	4493
education of handicapped children—	
program for preparation of professional personnel	6567
research and demonstration projects	6568
educational and cultural exchange program of State Department, American grantees, 1963, list	15096
educators of exceptional children, professional preparation	6580
environmental engineering and food protection, research grants, 1964	21856
environmental health sciences, research and training grants, announcements	1554, 21843
equalization, role in Federal grants	7876
Federal aids to State and local governments, catalog	10421
print additional copies, reports, 17859, 19480, 21189	
Federal assistance for projects in aging—	
community health services, pilot project contracts and cooperative agreements	9884
research and demonstration program—	
Education Office	7849
Vocational Rehabilitation Administration	7850
Welfare and Social Security Administrations	7848
Federal programs—	
discrimination in employment, hearings	6514
financial assistance programs administered by Office of Education	582
periodic congressional review, hearings	6511, 12219
fishery research, etc., projects of States—	
hearings	10330
Interior Dept. reports on legislation	12149
law	12004
report	10234
flood disasters, assistance to victims, authorize study by HHFA, report	461
foster-care of children in private institutions, extend period—	
law	21133
reports	8328, 17834
Health, Education, and Welfare Department	829, 18153
poster	10665
higher education facilities, financial assistance for construction, regulations	19629
highway construction act of 1964—	
hearings	8396, 12280
law	17282
reports	10211, 12066, 14093
highway construction practices in Arizona, report	12111
highway program—	
deficiencies and problem areas administered by Public Roads Bureau, GAO report	8710
New Jersey, right-of-way activities, inadequate administration, GAO report	21338
policy requirement, Public Roads Bureau, improper waiver, GAO review	6768



# INDEX 1964

Entry	Entry
Grants-in-aid—Continued	Grants-in-aid—Continued
highway program—continued	oceanborne foreign trade of U.S.,
right-of-way acquisition practices, report	contribution of Federal aid programs, 1959-62
right-of-way activities in California, Public Roads Bureau, legislative and policy requirements, GAO review	open-space land program guide, assistance under Housing act of 1961
State permitted to increased mileage, report	public assistance, statutory and administrative controls
highway research and development studies using Federal-aid funds, 1963-64	public health graduate training program, extend authorization—
highway transportation planning in urban areas, hearings	hearings
hospital and medical facilities construction—	law
hearings	reports
law	Public Health Service—
reports	for air pollution control programs, general information
housing and community development programs, chronology of major Federal actions, July 1962 through 1963	for research in community health
housing for farm labor, hearing	1962 funds, summary tables for extramural programs
housing the elderly, additional assistance, hearings	1963 funds, health services, formula and project
intergovernmental relations, results of questionnaire	1963 funds, mental health training
juvenile delinquency prevention and control, extend act—	1963 funds, training grants, traineeships, fellowships, etc.
law	public health, short-term training, general information
report	public works accelerated program to reduce unemployment—
land and water conservation fund act as landmark in legislation (remarks)	areas eligible for immediate public works assistance, list
land-grant colleges for establishing water resources research centers—	hearings
law	maximum for eligible areas
reports	report
library services act, amend—	research and development, administration, study—
law	committee print
report	report
library services and construction act	research and training programs of NICHD
local review of State and local applications, report	research grants and contracts, programmed learning and self-instructional media
low-income housing demonstration program, project directories	school districts affected by Federal activities, annual report, 1963
maternal and child welfare and combatting mental retardation, comments	science, mathematics, and foreign language instruction in public schools, guidelines
mental health planning, State proposals	scientific research, indirect costs re Federal grants, hearings
mental health project grants program of NIMH Federal assistance for projects in aging	senior citizens, Federal, State, and community services program
mental health training grants—	services for crippled children
professional status of personnel supported	small business concerns, construction of pollution treatment works, hearings, print additional copies, reports
program, 1962, statistical source-book	social welfare research and demonstrations
mental retardation research centers, construction grants	specialized adapted housing for blind veterans, expand—
metropolitan health research program	hearing
metropolitan planning, effectiveness of State and local applications	law
NASA educational programs, hearings	report
National Institute of Dental Research training grants	State mental health planning, proposals
national survey of State and local applications	States, etc., by Health, Education, and Welfare Dept., poster
nursing homes for veterans—	States, Great River Road, planning and coordination, increase—
hearings	law
law	reports
report	timing of payments for Federal grants, contributions, and other programs, regulations
nursing research grants and awards	transportation, development of comprehensive and coordinated systems in metropolitan areas—
nursing schools—	law
hearing	report
law	vocational education act of 1963—
reports	law
	report

	Entry
Grants-in-aid—Continued	
vocational rehabilitation agencies, professional examinations, final report	9872
vocational rehabilitation, extension and improvement program	9869
vocational training for adult Indians, amend act—	
law	1959
report	335
water pollution control, research and training—	
1963 awards, list	7711
1964 awards, list	21860
water pollution treatment works hearings	8395
reports	4580, 17627
water resources planning—	
hearings	12140
reports	494, 17621
Welfare Administration, Cooperative Research and Demonstration Program, policy, procedures, etc.	20880
Grantz, Arthur:	
Alaska's Good Friday earthquake, Mar. 27, 1964, preliminary geologic evaluation	10634
stratigraphic reconnaissance of Matanuska formation in Matanuska Valley, Alaska	14339
Granuloma inguinale, management in general practice	16840
Grapefruit, fresh, Florida and Texas, competitive practices in marketing	33
Grapefruit juice, canned, standards for grade, amendment	4
Grapes:	
loaded in railway refrigerator cars, improved fumigation with sulfur dioxide	4211
production, use, value, by States, 1962-63	15129
vines, nursery products, production and sales, 1962-63	15130
Graphic pamphlets series	187, 17115
Graphic summary of world agriculture	19090
Graphidaceae, <i>see</i> Lichens	
Graphite:	
ablation rates and surface temperatures during reentry, analytical and graphical prediction	9974
amorphous, temporary suspension of duty, continue	
law	13879
reports	8351, 12242
carbon-graphite materials at 20-3200°C, experimental techniques in investigation, USSR	21584
high density, recrystallized by hot forming	13652
industries, USSR activities	2656
materials, research and development	13652
matrix fuels development for AVR, final report	13693
minerals yearbook chapter	18666
refractories containing	4261
Graphs, <i>see</i> Charts.	
Grasses:	
competition with bitterbrush, effects	8664
culture, etc., publications, price list	10825
Great Plains, northern and central, dryland cropping systems, review of literature	7934
lawns, description	11760
<i>see also</i> Bluestem—Elgrass.	
Grasshopper (automatic weather station).	
<i>See</i> Weather stations.	
Grasshoppers, control	4201

	Entry
Grasslands:	
National Grasslands story	5850
national, range survey story and planning for management	13596
national, rules and regulations for protection, etc., enforcement in petty offense cases, provide—	
law	17396
reports	10249, 17765
Gratian, J. W., magneto-acoustic information storage system, research	13142
Gratuities:	
death benefits for reservists, authorize—	
law	19424
reports	15542, 19565
Gravel:	
minerals yearbook chapter	21719
operations and costs, Martin Marietta Corp.	5474
Graves, Albert H.:	
loading boxcars at country elevators in hard winter wheat area	19088
receiving grain at country elevators, hard winter wheat area	5834
Graves, Randolph A., Jr., free-flight test results on performance of cork as thermal protection material	18766
Gravimetry, surveys in mountain regions, computing effect of relief, USSR study	7279
Gravitation:	
acceleration, plasma nonesterified fatty acids in rats subjected to	16729
biological effects of gravitational acceleration	18232
changes of receptor cells of utricle under conditions of altered gravitation field, USSR study	9111
hydrostatic stability of liquid-vapor interface in gravitational field, lunar and planetary gravitational fields simulation technique	11399
overloads, influence on arterial system of extremity nerves, USSR study	21774
waves and superstars, USSR study	14616, 16077
Gravity:	
accelerations, reduction of direct measurements, USSR study	7279
anomalies, basis for calculation of plumb-line deflections, USSR study	902
cerebral hypoxia in response to gravity effects while breathing oxygen, USSR study	1238
earth potential through 4th order, drift of 24-hour equatorial satellite	7515
effect of G force on structure of vascular system	5270
equilibrium free surface of contained liquid under low gravity	20598
G-load, physiological reactions of cosmonauts, USSR study	9191
independent photosynthetic gas exchanger design study	11784
Long Valley study	6804
moon, simulation technique for studies of man's self-locomotion	9581
normal and reduced conditions, forces acting on bubbles in nucleate boiling	16683
Oregon, northwestern, geologic interpretation	18112
reduced, technique simulating effect	14832
survey and seismic studies in Crooks Gap area	14337

# INDEX 1964

	Entry		Entry
Gravity model trip distribution formula, <i>see</i> Transportation.		Great Britain—Continued	
Gray, Jerry J., mineral industry of Idaho	21699	south coast of England, sailing directions	20671
Gray, Vernon H., aerodynamic penalties caused by ice formations on airfoils	7534	technical cooperation, program in British Guiana, agreement	18972
Gray body, most closely fitting solar extraterrestrial spectrum, temperature	18730	tracking station on Canton Island, agreement	1609
Graybill, Lois, relief	15473, 19386, 19556	trade in cereals, etc., agreement	15117
Grayson County, Tex., hydrologic studies of watersheds, Honey Creek basin, 1953-59	15967	wage costs and trade advantage compared with EEC and U.S.	10305
Grazing:		Great Falls, Mont., aircraft accident	11922
hydrologic, etc., characteristics of grazed and ungrazed watersheds of Badger Wash Basin	4804	Great Lakes:	
pinon-juniper type of Arizona, effects	16969	development program, review and prospects	13398
range resource on lands administered by Forest Service, court cases related to administration	15935	fisheries, 1962, annual summary	693
Taylor grazing act, as amended and supplemented through Feb. 1, 1964	9483	light list and other marine aids	8172
woodland protection	2365	low water levels, economic impact, hearing	10595
Grease, fretting corrosion, reduction by pressure and antiwear additives	9688	navigation all year, study, hearings	2123
<i>see also</i> Lubricants.		notice to mariners	3801
Greasewood, livestock poisoning in western States, reducing losses	20915	pilot, survey	9480
Great Basin, surface waters of U.S., compilation of records, Oct. 1950-Sept. 1960	4820	supplements	1389, 11300, 13088, 14714, 18647-648, 20450
Great Britain:		pilotage services, agreement with Canada	3162
Atlantic undersea test and evaluation center, establishment in Bahama Islands, agreement	1612	Saint Lawrence Seaway transportation study, hearings	17873-874
Automatic vending machines, U.S. export market	143	transportation lines, 1964	14210
Beane Field Airport, St. Lucia, use, agreement	20837	waterborne commerce, 1962, summary 1953-62	7424
British Commonwealth, foreign relations of U.S., 1943—		waterborne commerce, 1963	19661
departmental edition	1506	Great Lakes States:	
document edition	275	hourly variation in fire danger	12463
colonial policy, Soviets criticize. Lancaster House is arena of hypocrisy	16564	labor organizations, reporting, register	16572
defense areas on St. Lucia, agreement	21882	northern region, resources and recreation	15221
dollar problem, report on fact-finding trip to England	10412	principal electric facilities, map	674
double taxation convention, application to Southern Rhodesia, etc.	7788	pulpwood cut continues to climb	18068
east coast of England, sailing directions, change	5575	pulpwood production in Lake States counties, 1962	6750
electronic products, market information	21070	small woodlands, rationale for research	8634
establishing business	12554	tart cherry industry, production costs	14170
foreign trade regulations	8821	Great Plains:	
job vacancy statistics in England	11288	central—	
lights and fog signals, list	11478, 14992, 21815	ornamental hedges	20914
logistical support for UN operations in Korea, agreement	11627	shelterbelt tree and shrub species under dryland culture	4221
maritime matters, use of United Kingdom ports and territorial waters by NS <i>Savannah</i> , agreement	20832	tree windbreaks	5815
market for photographic products. Northern Ireland, educational data	19279, 584	northern and central, legumes and grasses in dryland cropping systems, review of literature	7934
plastic sheet from United Kingdom, determination of no injury to U.S. industry	20850	northern, hedges, description, etc.	25
pocket guide	4278	southern—	
research studies completed, list	7758	morphological, physical, chemical and mineralogical properties of soils	1680
research studies in progress, list	9794	ornamental shrubs	24
social science research studies in progress, list	20814	woody vines	20913
		Great River Road:	
		interstate planning and coordination, increase Federal assistance—	
		law	21152
		reports	14091, 19490
		Great Sand Dunes National Monument, general information	14970
		Great Smoky Mountains:	
		central, geology	8764
		eastern, geology	2421
		geology of Great Smoky Mountains, Tenn. and N.C. (series)	2421
		Greater Southeast Community Hospital Foundation, Inc., relief	15657, 17212, 17476
		Greece:	
		agricultural commodities, agreements	3157, 20824
		cotton textiles, trade agreement	18981
		economy, basic data	8827

	Entry
Greece—Continued	
Educational Foundation and financing of exchange programs, agreement	7779
estate tax, convention of Feb. 20, 1950, protocol	10360
report	14030
foreign trade regulations	15986
Greece Town, N.Y., population, special census	171
Greek language, Foreign Service Institute, intermediate reader	1597
Green, A. H., jr., millimeter technology	7661
Green, A. J.:	
measuring soil, properties in vehicle mobility research	19664
stresses under moving vehicles	15878
Green, A. Rice, magnitude and frequency of floods in United States North Atlantic slope basins, Maine to Connecticut	21359
Green, J. H., artesian-pressure decline and land subsidence	10661
Green, Melville S., scientific and engineering manpower studies	6123
Green, Richard G., jr., relief	8275
Green, Richard S., storage and retrieval of data for water quality control	12177, 13851
Green, William J., jr., memorial services	15069
Green Bay, Wis.:	13837
consumer expenditures and income, 1961	2957, 5428
ground water conditions in area, 1950-60	6819
occupational wage surveys	1381, 2044
principal electric facilities, map	674
water resources of area	4802
Green River, oil shale in Utah, yields 1952-62	11326
Green vegetables for good eating	11759
Greenawalt, Ross D., soil survey report, Washington County, Nebr.	20804
Greenaway, W. T., changes in sedimentation value of stored wheat	6
Greenberg, Jacob, regenerative molten-salt, thermoelectric fuel cell	18768
Greenberk, Leon:	
addresses, etc.—	
Sept. 26, 1963	1387
Feb. 11, 1964	11298
June 16, 1964	14712
Aug. 11, 1964	18644
automation, nationwide studies in United States	5427
data for measurement of industrial productivity in U.S.	14707
Greene, Mark R., insurance and risk management for small business	5684
Greene, Omar V. Jr., correlation of dissolved nitrogen in whole blood with selected whole blood constituents	5903
Greene, Wallace M., jr., nomination, hearings	523
Greenhouses:	
plastic, control of carbon dioxide content	7891
plastic covered, building plan	7935
Greenland:	
Camp Century Movement record east, sailing directions, change	6588
shear zones in Thule ice cap margin	20669
southern, ice sheet elevations	12343
tide tables, 1965	8515
tunnelling in permafrost in Tuto area	11960

	Entry
Greenland—Continued	
undersnow structures, N-34 radar station	17941
Greenlee, Marvin M., relief	1913, 2167
Greenville, N.C., Voice of America complex	5738
Greenville, S.C., occupational wage survey	16601
Gregoras, Constantinos A., see Grigoraras, Constantinos A.	
Gregory, Keith E., beef cattle breeding	19064
Greiner, W. A., educational data, India	579
Grenada, labor organizations, directory	21376
Grenades:	
rocket experiment, temperature, pressure, density, and wind measurements, 1960-63	20621
rocket-grenade experiment system	7516
Greseth, Elbridge W., determination of principal stress directions through analysis of rock joint and fracture orientations, Star Mine, Burke, Idaho	11320
Greyhound Corporation, motor carrier accident	6864
Griffin, A. C., storage of seed cotton in trailers	7941
Griffin, Jeannine, basic data on economy of British Leeward Islands	8823
Griffith, Eugene, plant inventory 163, plant material introduced, 1955	15200
Griffith, J. R., filament-winding plastics, molecular structure and tensile properties	18862
Griggs, Roy L., geology and ground-water resources of Los Alamos area, N. Mex.	19798
Grigoraras, Constantinos A., relief	1912, 2179
Grimes, Hubert H., vacancy formation in gold under high pressure	14894
Grimes, W. V., relief	1905, 2170
Grinding and polishing:	
burnishing of aerodynamic surfaces, synthesis of mechanisms, USSR study	9326
continuous attrition grinding of coarse kaolin	2994
lathe converted for grinding aspheric surfaces	14814
Gristede, Johanna, relief of estate	6228
Grits, corn grits in family meals	7883
Groceries:	
institutional wholesale warehousing, improving	7928
wholesale business, Federal wage-hour law application	1652
Grocery stores, see Stores.	
Groemping, Franz A., labor law and practice in Austria	5432
Grogger, Harold E., soil survey, Daviess County, Mo.	16865
Gronouski, John A.:	
addresses, etc.—	
Feb. 1, 1964	5633
Feb. 4, 1964	5632
Feb. 22, 1964	7675
Feb. 26, 1964	7674
Mar. 20, 1964	9695
Mar. 23, 1964	9694
May 18, 1964	11534
May 28, 1964	13376
May 29, 1964	13374
May 31, 1964	13373
June 10, 1964	15020
June 24, 1964	15028
June 26, 1964	15024
July 16, 1964	15021
July 18, 1964	15023
July 31, 1964	16810



# INDEX 1964

Entry	Entry
Gronouski, John A.—Continued	Group behavior, children, research
addresses, etc.—continued	and informed judgment, guide. 14186
Aug. 11, 1964..... 16812	Group insurance, <i>see</i> Life insurance.
Aug. 12, 1964..... 16813	Grouting, foundation, field technique
Aug. 14, 1964..... 16809, 16811	and inspection, engineering
Aug. 17, 1964..... 16807	and design manual..... 617
Aug. 19, 1964..... 16808	Grove, Frank, relief..... 1905, 2170
Sept. 10, 1964..... 18877	Groves, Rees D., copper powder from
Sept. 11, 1964..... 18876	leach solutions after precipitation
Sept. 14, 1964..... 18879	with iron..... 16637
Sept. 17, 1964..... 18878	Growing raspberries..... 11756
Sept. 24, 1964..... 20723	Growth:
Sept. 28, 1964..... 20722	birch, nursery selection affects survival
Oct. 5, 1964..... 20721	children, research programs, studies
Oct. 10, 1964..... 20719	in progress..... 17120
Oct. 21, 1964..... 20720	forest trees, increasing value and
Oct. 27, 1964..... 21835	volume by better rate..... 2360
Grose, William L., isentropic 1-dimensional unsteady expansions in	radial increment in 2 density levels
equilibrium real air with particular	of red pine..... 777
reference to shock-	related changes in zinc content of
initiated flows..... 11420	human blood, USSR study..... 16042
Grosenbaugh, L. R.:	stimulants, development and study,
instant octal accounting, byproduct	USSR conference, report..... 21507
of forest growth studies..... 14323	stimulation factors from petroleum,
STX, Fortran 4 program for estimates	USSR studies..... 16201
of tree populations from	Grubs, <i>see</i> names of insects, etc.
3P sample-tree measurements..... 18083	Grumman Aircraft Corp., improper
Grosh, Wesley A., lightweight aggregates,	charges to Government cost-
expansion properties of	type and incentive-type
clays, etc., of Minnesota..... 1434	contracts, Navy Dept., GAO
Gross, Bernard, stress-intensity factors	report..... 10601
for single-edge-notch tension specimen	Grumman Aircraft Engineering Corporation:
by boundary collocation of stress function..... 16706	group insurance premiums, improper
Gross national product:	disposition of refunds, GAO report..... 4762
estimates, calendar year 1962, current	uneconomical procurement of electronic
market prices, free world summary..... 14397	equipment under contract with Air Force, GAO
output per man-hour for private	report..... 2400
economy, indexes..... 7417, 20445	Grun, Susanna, relief..... 301, 1908
Grossman, R. E., NS Savannah ventilation	GSA, <i>see</i> General Services Administration.
system filter testing..... 19252	GSR, <i>see</i> Galvanic skin response.
Grossman-Cooper, Anna, air pollution	Guadalupe Mountains, geology..... 15949
publications, selected bibliography, 1955-63..... 18892	Guadeloupe Island, weather stations
Ground, <i>see</i> Earth.	agreement, with France..... 7778
Ground effect, aerodynamic characteristics	Guam:
of full-scale fan-in-wing model with nose-fan pitch	agricultural services, establish—
control..... 18737	hearings..... 6336
Ground effect machines:	law..... 19392
viscous and forward speed effects	reports..... 502, 17573, 21188
on unbalanced jets in ground	algae, fossil and recent..... 10640
proximity..... 3173	census of housing, 1960..... 1806
viscous effects on balanced jets in	geology..... 19784
ground proximity..... 3174	geology and hydrology of Guam,
winged, general characteristics..... 9857	Mariana Islands (series)..... 10640,
Ground instructors, examination	14340, 19784
guide, basic-advanced..... 761	Governor, report, 1963..... 12539
Ground measurements of sonic-boom	labor organizations, reporting,
pressures for altitude range of	register..... 16574
10,000 to 75,000 feet..... 14903	petrology of limestones..... 14340
Ground operation equipment for	public school finance program, 1962-
Orbiting Astronomical Observatory..... 3007	63..... 4637
Ground squirrels:	rehabilitation, law..... 250
Alaskan—	shipping legislation, hearings..... 15596
blood variations during hibernation	submerged lands, place jurisdiction
and induced hypothermia..... 19142	within, law..... 263
excretion of animal or bacterial	urban renewal and housing, authorize
viruses..... 4252	public authority, law..... 251
experimental infections, influence	Guam Magnetic Observatory, magnetograms
of hibernation..... 19144	and hourly values..... 10115
intubation of abnormal aorta..... 7984	Guaranties and sureties:
low temperature effect on isolated	AID quarterly report, applications
hearts of <i>Citellus leucurus</i> and	in process..... 3957
<i>C. Mohavensis</i> ..... 4245	Communist countries obligations,
Ground temperature observations:	prohibit guaranty by Export-
Blg Delta, Alaska..... 17940	Import Bank, etc., hearings..... 524
Galena, Alaska..... 17938	housing investment guaranty program
McGrath, Alaska..... 17939	in Panama, staff survey
Ground water, <i>see</i> Water.	team report..... 10313

	Entry
Guaranties and sureties—Continued	
informational media, agreement with Pakistan	9837
investment agreement with—	
Bolivia	11637
China	7794
Kenya	13479
Mali	20835
Morocco	3151
Sierra Leone	5701
Somali Republic	7797
Sudan	11633
Tanganyika	3160
mutual deposit guarantee corporations, tax exemption, hearing	15805
programmes d'assurance et garantie de credit applicables aux exportations des Etats Unis	13824
Guardian and ward:	
State laws governing natural guardianship and support of minor children	19037
State laws governing right of minor, 14 years of age or over, to nominate own guardian	21928
Guarding United States and its outposts	11312
Guards (persons):	
public building, training handbook	7680
Guatemala:	
foreign trade regulations	14374
Inter-American Highway agreement	3158
labor organizations, directory	21376
Gubik formation of Quaternary age in northern Alaska	10635
Guenther, Kenneth A.:	
basic data on economy of Philippines	8816
establishing business in Philippines	8819
Guernsey cattle, <i>see</i> Cattle.	
Guerrilla warfare:	
operations against guerrilla forces, tactics, techniques, etc., utilized by Marine Corps, FMFM manual, change	1394
operations against units, FMFM manual, change	16619
Guerrillas:	
tactics, techniques, etc., employed by guerrilla forces, FMFM manual, change	1394
units, operations against, FMFM manual, change	16619
Guest, S. H., acoustic efficiency trends for high thrust boosters	14841
Guevara, Che, speech, Aug. 1961	1289
Guida, J. A., flexible coaxial cable	13343
Guidance:	
commitment to youth, progress under national defense education act, 1958-63, report	17913
educational, for stronger schools	607
national defense education act of 1958—	
NDEA and higher education (periodical)	3782
training institutes, announcement	4628
training institutes, program, policies and procedures manual—	14191
<i>see also</i> Personnel services in education.	
Guidance systems:	
booster, manned guidance and control	14789
circumunar mission, midcourse guidance using radar tracking and on-board observation data	9597
equations for quasi-optimum space maneuvers	18736
reference trajectories for lifting re-entry at supercircular velocity	13247

	Entry
Guidance systems—Continued	
terminal control techniques for guidance during direct and skip entries for capsule-type vehicle	7508
<i>see also</i> Homing guidance.	
Guide books:	
ARA overall economic development programs, guidebook for area redevelopment organizations	13662
election law, 1964	10356
print as Senate document, report	8431
<i>see also</i> Pocket guides.	
Guide cards, file, pressboard, Federal standard	688
Guide for aviation medical examiners	19270
Guide to laws enforced by Alcohol and Tobacco Tax Division, for law enforcement officers	14366
Guide to record retention requirements	6684
Guide to research and informed judgment on grouping children	14186
Guidebooks, <i>see</i> Guide books.	
Guided missiles, <i>see</i> Missiles.	
Guides for totally blind on air carriers, hearing	10322
Guiding antiaircraft missiles to target	10834
Guldry, Nelson P., graphic summary of world agriculture	19090
Gulfoy, Richard F., liquid carbon dioxide refrigeration in frozen-food trailer	8
Guillou, R. B.:	
Camden-Delaware Valley area (ARMS-II)	111
Las Vegas area (ARMS-II)	4292
Norfolk-Peninsula area (ARMS-II)	4293
Guinea:	
agricultural commodities, agreement	5707
preparing shipments to—	868
Gulf, <i>see</i> name of gulf, or place where located.	
Gulf Coast:	
light list, Little River, S.C. to Rio Grande, Tex., and Antilles	6112
shrimp data	3562, 6701
storm warning facilities chart Morgan City, La. to Apalachicola, Fla., 1964	9879
transportation lines	6596
waterborne commerce, 1963	17958
Gulf Intracoastal Waterway, <i>see</i> Intracoastal Waterway.	
Gulf of Alaska, <i>see</i> Alaska, Gulf of.	
Gulf of Mexico, <i>see</i> Mexico, Gulf of.	
Gulf Shipper (SS):	
launching ceremonies at Avondale Shipyards (remarks)	7425
Gulf States:	
coastal plain, Upper Cretaceous strata, correlation with Western Interior and Europe	18138
fisheries, 1962 annual summary	2335
<i>see also</i> Gulf Coast.	
Gulf stream, USSR study	7139
Gulleh, A. R., egg grading manual	11751
Gum, <i>see</i> Gums.	
Gummed and pressure-sensitive tapes, methods of testing	15907
Gums, formation fundamentals, study of gasoline storage stability	13104
Gun tubes, design handbook, AMC pamphlet	8024
Gunderson, Doris V., research in reading readiness	600
Gunderson, R. W., frequency tracking square wave oscillator	20619
Gunners, <i>see</i> Gunner's mates.	

# INDEX 1964

	Entry
Gunner's mates:	
G 3 & 2, Navy training course.....	18847
school, class A course, trainee's guide, Navy.....	3079, 7639
Gunnison River, Black Canyon, Curecanti pluton, unusual intrusive body.....	4780
Guns, <i>see</i> Firearms—Spray guns.	
Gura, Benjamin, Providencia, case study in economic censuses.....	15325
Gustafson, Arthur F., Soviet publications on numerical prediction for 1962.....	11691
Gustavson, Samuel A.:	
mineral industry of Delaware.....	20488
mineral industry of Rhode Island.....	21705
Gusts, <i>see</i> Winds.	
Guthrie, Robert, phenylketonuria detection in newborn infant as routine hospital procedure.....	15332
Gutowska, Bozena, relief.....	6253, 11989
Guy, H. P., storm-period variables affecting stream sediment transport.....	10646
Guyandot River:	
Justice Reservoir, designate as R. D. Bailey reservoir—	
hearing.....	21211
report.....	19468
Gwin, J. W., sr., relief of estate.....	6230
Gymnodinium breve, counts of red-tide organisms, etc., from Florida west coast, 1960-61.....	4745
Gypsum:	
and products, mineral industry survey, quarterly.....	3563
board products, recommendation of trade.....	5548
minerals yearbook chapter.....	18667
Gyroscopes:	
twin-gyro attitude control system for space vehicles.....	16718
two-degrees-of-freedom, use as satellite yaw sensor.....	7531
<b>H</b>	
H.E.W., <i>see</i> Health, Education, and Welfare Department.	
H.H.F.A., <i>see</i> Housing and Home Finance Agency.	
Haack, Paul M., Jr., volume tables for trees in interior Alaska.....	2375
Habeas corpus, applications, amend U.S. code, reports.....	10255, 12090
Habib, E. J.:	
development of range and range rate spacecraft tracking system.....	13214
ground operation equipment for Orbiting Astronomical Observatory.....	3007
Habitat relations of vertebrates of Sierra Ancha Experimental Forest.....	12479
Hackensack River:	
navigation channels, maintenance, engineer report—	
departmental edition.....	8518
document edition.....	8260
Haddock, fillets, sub-sterilization doses of radiation effect on storage life.....	5988
Hadley, Jarvis B., geology of eastern Great Smoky Mountains, N.C. and Tenn.....	2421
Hadley, Richard F., hydrology of stock-water development in southeastern Idaho.....	814
Hady, W. F., friction, wear, and dynamic seal studies in liquid fluorine and liquid oxygen.....	18779

	Entry
Hafnium:	
alloys, columbium-hafnium equilibrium diagram.....	16642
compact, production by iodide method, USSR study.....	2665
hafnium-tantalum equilibrium diagram.....	18703
high-purity, analysis by optical emission spectrography.....	7460
minerals yearbook chapter.....	16648
vapor pressure of hafnium (IV) iodide by metal diaphragm technique.....	9500
Hafnium carbide, heat of formation.....	18700
Hagarty, J. H., history of Weather Bureau climatological record forms for surface synoptic and airway observations.....	13529
Hagenstein, Perry R., location decision for wood using industries in northern Appalachians.....	8680
Hagerman National Wildlife Refuge, birds, list.....	6723
Hagopian, N., nuclear explosions, timing and firing system.....	121
Hague Conference on Private International Law:	
United States participation—	
law.....	1973
report.....	2216
Hal Yung Jung, <i>see</i> Jung, Hal Yung.	
Haldar, Walter:	
basic data on economy of French Guiana.....	21085
foreign trade regulations of Argentina.....	14380
Hail, spongy, radar reflectivity of storms containing.....	19152
Haiti:	
foreign trade regulations.....	2454
labor law and practice.....	2958
Halberg, Henry N.:	
ground water resources of eastern Arkansas in vicinity of U.S. Highway 70.....	19802
water resources of Albany-Schenectady-Troy area, N.Y.....	4800
Hald, Helen F., seasonal adjustment factors, wholesale price index, selected series, 1948-61.....	1375
Hale, Henry B., endocrine and metabolic effects of short-duration hyperoxia.....	8001
Hale, Mason E., Jr., studies on Parmella subgenus Parmella.....	18819
Haleakala National Park, general information.....	11466
Haley, Joseph L., Jr.:	
crash injury investigation, C-131E.....	13494
personnel restraint systems study—CH-47 Vertol Chinook, crash injury evaluation.....	21905
CV-2 DeHavilland Caribou.....	20854
Half dollar:	
commemorating John F. Kennedy—	
law.....	1983
proposal.....	1992
report.....	2067
Halfway houses:	
delinquent youth.....	4359
ex-mental patients.....	13508
Halides, metal, vapor pressure, servo-mechanical system for measuring.....	11327
Halkias, Irene N., relief.....	6258
Hall, Elizabeth H.:	
handbooks, report bibliography.....	14166
PERT (program evaluation and review technique).....	93
Hall, Jay V., concrete block revetment near Benedict, Md.....	12336
Hall, L. A., thermophysical properties of argon from 0 to 300° K.....	14941

# JANUARY-DECEMBER

	Entry		Entry
Hall, Pauline P.:		Hampton National Historic Site, general information-----	14971
behavior of liquids on cords for seams of protective overgarments-----	11590	Han, Linus, relief-----	14033, 21111
Quarrel application and test methods for cotton thread-----	5671	Hancock, Eugene A., testimony, hearings-----	6526
Hall, Robert J., visual display enhancement and techniques of color filtering-----	9980	Hancock County, W. Va., coal, preparation characteristics-----	14746
Hall, W. J., brittle-fracture propagation-----	1576	Hand tools:	
Hall, William F., agriculture in India-----	8471	Federal item identification guides for supply cataloging-----	12290
Hall effect:		supplements-----	3471
devices as magnetometers in cryogenic applications-----	11402	Handbooks:	
sensitivity indices for Hall generators-----	7582	cataloged by ASTIA, report bibliography-----	14166
Hall of Fame, National Aviation, see Aviation Hall of Fame.		Federal, index, supplements-----	3585
Hall of Honor, Labor Department, dedication ceremony (remarks)-----	13029	see also names of departments, etc., issuing hand books—also subjects.	
Halleck, Charles A., record of press conference statements for joint Senate-House Republican leadership-----	2136, 19535	Handicapped:	
Haller, Henry C.:		ability counts, program guide for women's groups-----	21665
comparison of heat-rejection and weight characteristics of several radiator fin-tube configurations-----	14898	children—	
heat-rejection, etc., characteristics of fin-tube space radiators-----	7535	and youth, organization and implementation of programs-----	17920
Hallford, Fred, testimony, hearings-----	8456	grant program for preparation of professional personnel in education-----	6567
Hallcock, Hiram, sawing accuracy in circular mills-----	14310	program for preparation of professional personnel in education-----	19637
Halls, L. K., forage and cattle management in longleaf-slash pine forests-----	13583	research and demonstration projects in education, grants-in-aid program-----	6568
Hallucinogen, anticholinergic, psychopathology, etc., of psychoses produced, Czechoslovak study-----	7072	employment—	
Halogeton glomeratus, livestock poisoning in Western States, reducing losses-----	20915	Advisory Council of President's Committee on Employment of the Handicapped, special report to the President-----	20431
Ham, farm-cured, aging as affected by cutting, curing, and smoking method-----	7954	new dimensions in services to applicants (remarks)-----	18619
Hamann, John A., multiple-occupancy warehouses for poultry and egg wholesalers-----	7929	sheltered workshop under Fair labor standards act-----	11681
Hamareneh, Sami, history of Division of Medical Sciences-----	21801	speakers handbook-----	7371
Hamel, Harvey R., job tenure of American workers-----	5447	help open the doors, suggested changes in public buildings-----	11266
Hamerschlag, Robert W., establishing business in United Kingdom-----	12554	housing, include in loan program for elderly, hearing-----	392
Hammel, H. T., thermal and metabolic response of Kalahari Bushmen to moderate cold exposure-----	4243	how handicapped are overcoming barriers to employment in my community, 1965 report theme contest, 11th and 12th grade students, announcement-----	11251
Hammer, J. J., volume recombination of cesium ions-----	5725	performance, story of the handicapped-----	3845
Hammerman, Herbert, case studies of displaced workers, experiences after layoff-----	16610	physically, rehabilitation in home-making activities, proceedings of workshop-----	3186
Hammond, Alexander D., aerodynamic characteristics of spoiler-slot-deflector control on 45° swept-back wing-fuselage model-----	1464	President's Committee on Employment of the Handicapped, general information-----	18620
Hammons, Donald R., cattle killing-floor systems and layouts-----	9952	publicity handbook, program guide 1964-65-----	18618
Hampton, Eugene R.:		vocational rehabilitation and employment of disabled (address)-----	11244
geologic factors that control occurrence and availability of ground water in Fort Rock Basin, Lake County, Oreg-----	19783	see also Disabled.	
geology and ground-water resources of Upper Grande Ronde River basin, Union County, Oreg-----	8776	Handicraft:	
Hampton, Va., occupational wage survey-----	18635	bibliography-----	18943
		Indian handicraft series-----	2439
		Handling and storage of liquid propellants, corrections-----	4597
		Handling equipment:	
		aircraft, ground, Federal item identification guides for supply cataloging-----	12297
		supplements-----	3478
		liquid and gaseous helium, design handbook-----	5870
		materials, Federal item identification guides for supply cataloging-----	12289
		supplements-----	3470
		self-balancing beam permits safe, easy load handling under overhang-----	9561



# INDEX 1964

	Entry		Entry
Hands, immersion in cold water, effects on digital blood flow	20955	Hardhead, filtration process for recovery of tin	20505
see also artificial limbs		Harding, Francis D.: electronic engineer job types in Air Force Systems Command	18634
Handsheets, tensile properties, effect of restraint during drying	18079	Markov chain theory applied to prediction of retirement rates	15235
Handwriting, analysis and code of criminal procedure, West Germany	10816	Harding, Lowry W., reading instruction in Armed Forces, teaching guide	556
see also Penmanship		Harding, Paul L., Florida oranges, forecasting quality and pounds-solids	9011
Hanel, Rudolf A.: exploration of atmosphere of Venus by simple capsule	14839	Hardison, C. H., water supply characteristics of streams in the Delaware River basin and southern New Jersey	824
probe which enters atmosphere of Mars	3008	Hardness, low-alloy steel, isothermal transformation and hardenability, effect of uranium	18697
radiative equilibrium in planetary atmospheres, application of strong line absorption law to atmosphere of Venus	18742	Hardrath, Herbert F., NASA research on materials applicable to supersonic transports	20566
Hanes, John K., organization of wholesale fruit and vegetable markets in Minneapolis-St. Paul, and Duluth-Superior	5838	Hardware: builders', engineer manual, appendix 1, samples on file in D.C. changes	6592, 19656
Hanford, Calif., isotope production plant engineering study	8057	builders' samples on file in Washington, D.C. chart	1648
Hanford reactor, see Reactors (atomic)		Federal item identification guides for supply cataloging	12295
Hangars, Air Force, pumping station for fire protection, engineering manual, change	4667	supplements	3476
Hanish, S.: analytic formulas for acoustic pressure distribution between spherical transducer and concentric spherical baffle	18859	retailing	13444
wave functions, digital computer program		Hardware stores, see Stores	
prolate radial spheroidal, calculating	18326	Hardwoods: burning does not control on short-leaf pine sites in Cumberland Plateau	14308
spheroidal eigenvalues, calculating	13324	cull development under all-aged management of stands	788
Hankel functions, see Bessel functions		cull, what happens after heavy cutting in mixed stands?	8648
Hanks, Robert W., soft-shell clam	10564	dense, nailing	18055
Hannah, Margery E., factors affecting accuracy of position fix for lunar trajectories	7539	epicormic branching in north Louisiana Delta	18077
Hannan, P. J., feasibility of oxygen production by algae for nuclear submarines	5602	forest litter in southern Appalachians, rainfall interception	14332
Hanover, N.H.-Norwich, Vt., Interstate School District, establishment, granting consent of Congress, law	257	labeling act, hearings	6364, 6500
Hansen, Henry A., waterfowl report, Alaska, 1961	2333	nectria canker	18044
Hansen, P. A., his theory of satellite orbit calculation as modified by Musen	5524	neutral sulfite semichemical pulps, 2-stage nonchlorination bleaching	18057
Hansen, Wallace R., Cerecanti Pluton	4780	plywood, current industrial reports	161, 11896
Hansen, Warren G., farming practices and concentrations of fission products in milk	16833	pulps, strength and fiber fractions	12444
Hansley, Margaret W., education directory, higher education, 1962-63, supp	2270	value losses in southern hardwood lumber from degrade by insects	18085
Hanson, C. H.: performance of two-clone crosses in alfalfa, etc.	5864	veneer grades recommended for development of log grades	8673
relative performance of alfalfa varieties, etc.	5859	West Virginia— cost of marking sawtimber	8651
Harbor workers, see Longshoremen		tree diameter poor indicator of age	8647
Harbors: and rivers, miscellaneous bills, 1964, hearings	17663	western Kentucky, establish hardwood pulp mill in an 8-county area, technical and economic feasibility	17027
facilities, Navy design manual, changes	3201, 20893	white trunk rot	18045
river and harbor act of 1962, amend, report	19470	Hardy, Arthur E., measuring capacity to work, report on seminar for physicians in Rhode Island	7734
waterborne commerce	626, 17958, 19661, 21281	Hardy, Catherine E., list of publications of PCS	14220
see also names of harbors or places where located		Hardy, Charles E., forest fires in Alaska	10590
Harscik, Tibor, relief	292	Hardy, Edward P., Jr., HASL fall-out program quarterly summary report	5962, 11860, 15281
Hard wheat, see Wheat		Harelin, Phillip K., effectiveness of fumigants to stored-product insects	11769
Hard woods, see Hardwoods		Haren, Claude C., median family income and related data, by counties, etc.	5861

# JANUARY-DECEMBER

	Entry
Hargreaves, John, water recycling system for use in sealed environments	75
Harlee, John: addresses, etc.—	
Jan. 13, 1964	4701
Feb. 25, 1964	6638
Mar. 2, 1964	6639
Apr. 16, 1964	8551
May 13, 1964	10522
Sept. 18, 1964	19687
Oct. 20, 1964	21298
Oct. 21, 1964	21300
Oct. 29, 1964	21301
Harmon, Hubert R., memorial lectures in military history (series)	9066
Harney, Stanley L., relief	8283, 15634, 17187
Harper, Charles W., stall characteristics of swept wings	14896
Harper, John C., II, better laws	11760
Harper, Paul, spare-time education for workers in Communist China	15856
Harper, Thelma H., community efforts to improve conditions for agricultural workers	18613
Harrell, Shelley, crystalized glass ceramic, rolling-contact fatigue process	3030
Harris, David D., stream gaging control structure for Rio Grande conveyance channel near Bernardo, N. Mex.	21357
Harris, E. E., effect of urban growth on streamflow regimen of Permanente Creek, Santa Clara County, Calif.	18139
Harris, Gordon L., effects of transpiration through angled slots on development of turbulent boundary layer	21909
Harris, J. Donald, compensatory and pursuit tracking of pitch	5466
Harris, Norman O., stannous fluoride topically applied in aqueous solution in caries prevention in military population	13649
Harris, Roy V., Jr., effects of distributed roughness height of aerodynamic characteristics and boundary-layer transition of wing-body-tail configuration at Mach number 1.61	13245
Harris, Russell D., relief	8276
Harrison, Benjamin, papers, index	13095
Harrison, Eward T., soil survey report, Walla Walla County, Wash.	9775
Harrison, Roland H., perfluorocyclobutane, thermodynamic properties	14757
Harrison, Wyman, nearshore tidal and nontidal currents, Virginia Beach, Va.	12342
Harrison, N. J., railroad accident	14406
Harry, David P., III, steady-state analysis of laminar instability problem due to heating parahydrogen in long slender tubes	7507
Harry Diamond Laboratories, technical reports	5628, 7663-64, 13371
Hart, Josephine F. L., shrimps of genus Bataeus of Pacific Coast	7608
Hart, Philip A., testimony, hearings	14156
Hart County, Ga., soil survey report	3140
Harter, H. Leon, tables of incomplete gamma-function ratio, etc.	11800
Hartford, Conn., water resources of area	10649
Hartford City, Ind., railroad accident	21379

	Entry
Hartford County, Conn., clay, examining and testing for lightweight aggregate use	18668
Harvesting:	
Christmas trees, Pacific Northwest	2366
Douglas-fir for maximum income	2359
fruit, mechanization	5796
fruits and vegetables, use of cushioning materials	13567
mixed-conifer stands, seed-tree and selection harvesting costs, comparison	2377
practices, Yazoo-Mississippi Delta, effects on fiber and spinning properties of cotton, 1959-60	13587
Harvesting machinery, mechanical picker attachments for harvesting cotton research plots	4101
Harvey, A. D'Arcy, air traffic patterns and community characteristics	83
Harvey, William D., contamination-induced luminosity ahead of blunt body in Langley hotshot tunnel	18775
Hasbrouck, Frank F., moths of family Acrolophidae in America north of Mexico (Microlepidoptera)	20655
Haskell, Henry H., using FPL hardwood veneer grades	8642
Haskin, W. L., explosion-proof testing techniques	7957
Hassan, H. A., transport properties of partially ionized gas in presence of electric and magnetic fields	14893
Hatch, Winslow R., reporter, clearinghouse of studies on higher education	598
Hatch experiment station act, see Agricultural experiment stations.	
Hatcheries, see Chickens—Fish and fisheries—Poultry—Turkeys.	
Hatfield, Jimmy L., noise problems associated with operation of Army aircraft	5949
Hats, see Headgear.	
Hattendorf, Gerald A., flight qualification of ribless guide surface drag parachutes, etc.	5882
Hatton, T. T., Jr., seasonal changes in Florida avocados	19104
Hauch, Charles C., foreign understanding and interpretation of U.S. education	6566
Hauft, Milton L., testimony, hearings	6526, 8456
Haugen, Duane A., Ocean Breeze and Dry Gulch diffusion programs	5871
Havas, Nick, pilot food stamp program, impact on retail food store sales in Arroyales Parish, La.	12309
Havens, Richard, bertrandite, etc., from Mount Wheeler ores flotation	9504
Haverhill, Mass., occupational wage survey	18634
Havill, Jerry R., twin-gyro attitude control system for space vehicles	16718
Hawaii:	
acanthurid caligoid copepods (crustacea), parasitic on fishes	7602
air transportation, certification and operation rules, civil air regulations amendment	10505
airman's guide	8245
annual survey of manufactures, 1962, standard metropolitan statistical areas and large industrial counties, statistics	8104
certification and operations rules for certified route air carriers, civil air regulations, amendments	12367-370

# INDEX 1964

	Entry		Entry
Hawaii—Continued		Hazard Park, Calif. :	
climatological data-----	3329	land exchange-----	
coast pilot-----	1850	law-----	17293
coastal warning facilities chart-----	5757, 1168	reports-----	361, 15751
coasts, interim survey, engineer report-----		Hazardous occupations, see Occupations.	
departmental edition-----	19648	Hazardous substances:	
document edition-----	19444	labeling act, notices of judgment-----	6736, 18040
fisheries, annual summary, 1963-----	19719	water pollution, removal of hazards, reimbursement of Government expenditures, report-----	15524
Kilauea Volcano, 1961 eruption-----	14345	Hazen, Scott W., Jr.:	
labor organizations, reporting, register-----	16574	sample, etc., data, Phosphoria formation deposits-----	9518
lights and fog signals, list, changes-----	3074, 13311, 18845	using unequal sample interval lengths and weighted averages in estimating grade of ore for bedded deposits-----	9523
minerals industry, minerals year-book chapter-----	21698	Headgear, exclude headwear from wool products labeling act, report-----	15713
monofilament gill net fishing for skipjack tuna, 1961-62-----	15916	Healer, J., biological mechanisms for application to instrument design-----	16654
municipal waste facilities-----	3109	Health:	
municipal water facilities-----	18914	and medical activities, need to realign organizational and management structure, District of Columbia Government, GAO report-----	8726
Nepal alder, physical and mechanical properties, limited evaluation-----	18054	animal, veterinarian and FDA, guardians-----	14286
principal electric facilities, map-----	680	aspects of nuclear weapons testing-----	13721
public lands, revise procedures established by statehood act-----		children of school age-----	19313
hearings-----	535	community health emergency preparedness-----	20755
law-----	1962	community services-----	
reports-----	501, 2035	activities, outpatient psychiatric clinics, State and U.S., 1962-----	13286
radiotelephones on certain cargo vessels on voyages between ports, permit, hearings-----	10326	chronically ill and the aged, PHS project grants program-----	15166
routes of U.S. air carriers, map-----	1832	older people, pilot project contracts and cooperative agreements, Federal assistance-----	9884
salaries of white-collar workers, May-June 1963-----	7415	Public Health Service grants for research-----	1555
soils, moisture constants and physical properties-----	2389	community's interest in health and safety of health workers (remarks)-----	14672
surface waters, compilation of records, July 1950-June 1960-----	14355	conditions and programs, reference facts-----	8789
tide tables, 1965-----	6109	consumer information, price list-----	21842
volcano observatory, summary-----	3568	Czechoslovak Ministry of Health research plan, 1964-65-----	1203
volcanoes during 1955-----	4779	dental programs in local health departments, census, 1962-----	16830
waterborne commerce, 1963-----	21281	Division of Occupational Health activities-----	11562
Hawaii Volcanoes National Park, general information-----	11467	economics, chart book of basic data-----	7693
Hawaiian Islands, see Hawaii.		education of tropical mother in feeding her young child-----	10080
Hawaiian Volcano Observatory, summary, quarterly-----	3568	effects of automation and technological change, abstracts-----	7358
Hawkins, Gerald S., velocity of faint meteors-----	18945	efforts with modern theories of communication-----	4360
Hawkins, Murphy E., chemical analyses and electrical resistivities of oilfield brines from fields in east Texas-----	11328	emergency activities, appropriations, 1965, hearings-----	10290
Hawkins, Willis M., Jr., nomination, hearings-----	523	emergency, preparedness publications catalog-----	18905
Hay:		environmental-----	
bromegrass-crested wheatgrass hay production, interrelationships of nitrogen, phosphorus and precipitation-----	5858	coordinating community study-----	18896
United States, quantities grown in normal year, surplus and deficit areas-----	15222	health programs of Public Health Service, career information-----	5652
Hayashi, Chushiro, evolution of massive stars, hydrogen exhaustion through onset of carbon burning-----	9613	research needed in solid wastes, public health aspects-----	13415
Hayashi, Masami, electrochemical recovery of cobalt-nickel alloy from superalloy scrap-----	13121	environmental health series-----	
Hayes, Alfred S., language laboratory facilities, technical guide, erratum-----	2272	air pollution-----	15047
Hayes, Murray L., movements of king crabs tagged and released in Shumagin Islands area-----	6728	radiological health-----	9713, 16833, 21847
Hayes, Philip T., geology of Guadalupe Mountains, N. Mex.-----	15949	environmental sciences, research and training grants, announcements-----	1554, 21843
Hayes, Richard L., oral cancer and occupational health-----	20766		
Haytko, Alexander, relief-----	2006, 6146, 6408		

# JANUARY-DECEMBER

	Entry
Health—Continued	
examination survey—	
and your child	9736
children, 6–11 years	13400
cycle 1, sample and response	9734
facts and figures, grants, etc.	829, 18153
fakes and swindles in health field,	
catalog	19743
farm population, major problems	5655
Federal medical and health-related	
programs, special analysis	142
frauds and quackery affecting the	
elderly, hearings	14122, 15788, 17862
group practice, Federal Government	
interests	11554
hazards to health workers (re-	
marks)	13034
health and medical care, public and	
private expenditures, prelimi-	
nary estimates, 1963–64	16862
health economics series	7693, 16837
health information leaflets and	
pamphlets, list	15038, 20761
health information series	1357–
59, 7694, 9716, 11557–558, 13401,	
15048–50, 16838, 18889–904,	
20750–753, 21850.	
health interview survey	
concepts of morbidity, disability,	
and utilization of medical ser-	
vices and facilities, question-	
naire development, etc.	11582
current estimates	
July 1962–June 1963	9733
July 1963–June 1964	21859
health manpower source book	5653, 20754
health mobilization series	5654.
7695, 11559, 13402, 15051–53,	
18905, 20755–756, 21851–852	
health of Nation, message from the	
President	6209
health survey procedure, concepts,	
questionnaire development, and	
definitions in health interview	
survey	11582
higher education in Rumanian Peo-	
ple's Republic	16080
human, and laws of biology and	
sociology, USSR study	18318
Hungary, medical science and so-	
cial public health activities, re-	
lationship	21588
improvement of public health in	
RSFSR, USSR study	20270
Indian highlights	15054
indicators	3570
maintenance programs for small	
business	13447
Mali, public health and social af-	
fairs, seminar reports	21583
man, medicine, and work, historic	
events in occupational medi-	
cine	7699
manpower planning, community	
emergency	13402
maternal and child health services,	
increase, comments	2128
methods of protecting health of	
rural workers, USSR study	20118
metropolitan program, research op-	
portunities	9722
mobilization, training literature,	
list	15051
national and individual programs	
(address)	7688
needs of migrant children in Kan-	
sas day care program	9717
occupational health and oral	
cancer	20766
occupational safety and health—	
legislation, summaries	11263, 14674
State law, suggested lan-	
guage	13039–40

	Entry
Health—Continued	
people act through community par-	
ticipation and by working	
together, exhibit deplets ad-	
vances	1646
physical culture and health, USSR	
studies	20070
professions education, hospital and	
medical facilities series	13403, 16839
professions, message to graduates	
(address)	7833
public—	
advisor, examination announce-	
ment	21050
agricultural migrants	5645
analyst, examination announce-	
ment	21050
code of Federal regulations	6680
community services, research	
grants program	11574
Cuban Republic	7173
dental public health, U.S. and	
Canada, trends	9730
engineering abstracts	3944
grants for graduate training	
program, extend authoriza-	
tion—	
hearings	10321, 15816
law	17356
reports	13984, 17725
improve through revising hos-	
pital, etc., provisions of PHS	
act—	
hearings	8387, 14153
law	17302
reports	10217, 10256, 15731
laws, compilation	12144
local health organization and	
staffing within standard metro-	
politan areas	3110
outdoor recreation, policy—	
problems resulting from expan-	
sion of chemical industry,	
USSR study	20123
professional personnel graduate	
training program, extend	
authorization—	
hearings	10321, 25816
law	17356
reports	13984, 17725
projected measures for improve-	
ment in Soviet Union	19050
public health agencies of RSFSR,	
statistics, 1964	21590
public health bibliography	
series	1562,
9721, 11568, 13416, 15043, 16842,	
18916–918, 21854.	
public health monograph	
series	1563, 11569
public health nursing services,	
how to study patient progress	13406
public health reports	3945
public health service act, amend,	
hearing	12146
Public Health Service grants,	
etc., 1963 funds—	
mental health training	13283
training grants, traineeships,	
fellowships, etc.	7589
public health services, economic	
benefits, objectives, methods	
and examples of measurement	21846
RSFSR, improvement in public	
health measures, report	20049
scientists, examination announce-	
ment	209
service in Moldavian SSR	21406
service in Russian Federation,	
USSR studies	20203
short-term training grants, gen-	
eral information	1556
State and public agencies, class	
specifications for nursing pos-	
tions, guide	13393



# INDEX 1964

Entry	Entry
Health—Continued	Health—Continued
public—continued	voluntary health and welfare agen-
state legislations, summary	cies, fund-raising within Fed-
1962 ----- 1566	eral service, manual, 3705, 17136
State salary ranges, 10667, 19807	see also Medical care—Mental
successful fulfillment of CPSU	health.
program ----- 18516	Health and Safety Division, AEC,
traineeships for professional per-	standard health and safety re-
sonnel ----- 11580	quirements, ID manual, 5964
USSR—	Health and Safety Laboratory:
diverse regions, 19974	AEC fallout program, quarterly
expanding chemical industry, 5335	summary reports, 115,
party program, 19965	5962, 11860, 15281
problems, 9172	contributions to study of fallout in
studies, 16560, 18286, 20224	food chains ----- 15282
publications, price list, 13390	standard procedures manual, 5975
radiological—	Health boards and departments:
bibliography ----- 13413	directory, local units, 1964 ----- 20746
iodine-131 surveillance measure-	metropolitan areas, organization
ment in milk analytical	and staffing ----- 3110
quality control service of	State and territorial health author-
Radiological Health Division,	ities, directory 1964 ----- 18897
interlaboratory study, 20743	State and territorial health officers
radiological data, monthly re-	conference with Public Health
port ----- 3950	Service and Children's Bureau,
radiological health manual for	1963, preliminary report of ac-
experimental gas-cooled re-	tions ----- 5662
actor ----- 13691	Health centers:
university curriculums and fel-	International Ladies' Garment
lowships ----- 18923	Workers' Union anniversary
recent translations, selected list, 3963	medal—
research for health, report from	law ----- 265
NIH ----- 16751	report ----- 458
research, mission of Research Faci-	Health, Education, and Welfare De-
lities and Resources Division,	partment:
National Institutes of Health, 3058	aids to students, financial and other
Russian SFSR, organs and institu-	assistance through programs
tions, indicators of increase in	administered by HEW, guide, 21365
medical personnel, 2639	air pollution control program sup-
services, research relating to chil-	port under clean air act ----- 11548
dren, studies in progress, 17120	air pollution prevention act control
shopping, publications, list, 15038	activities—
smoking and health—	law ----- 1935
authorize research by Agriculture	description ----- 4825
Dept. -----	reports ----- 382, 465
hearings ----- 8353	alcoholism programs, DHEW role
report ----- 4484	in ----- 20769
Surgeon General's Advisory Com-	appropriations, 1964—
mittee report ----- 5664	deficiency, hearings ----- 10285
excerpts on smoking and oral	supplemental—
cancer ----- 16845	hearings ----- 4489, 4570, 6342
summary ----- 21858	law ----- 6179
smoking, health, and you, facts for	reports ----- 2070, 4536
teenagers ----- 19312	appropriations, 1965—
State departments, role in medical	hearings ----- 8350-60, 17864
care ----- 9726	law ----- 19413
State school laws and regulations, 17924	reports ----- 8343, 17623, 17778
statistics—	supplemental—
analytical studies, 7705, 9732	hearings ----- 19589
data evaluation and methods re-	proposal, 15417, 15609, 19529, 21165
search ----- 7704	budget, 1965, amendments, 8255, 15614
data from national health sur-	conditions and programs, reference
vey ----- 5666,	facts ----- 8789
7706, 9733-34, 11583-585, 13423-	directory, field ----- 12530
424, 15071, 16846, 18924-926.	employment data needed for eval-
data from National Vital Statis-	uating etc., training, under
tics System ----- 20771, 21859	Manpower development and
organization, etc., of National	training act of 1962, GAO re-
Center ----- 5661	port ----- 10610
programs and collection proce-	facts and figures ----- 829, 18153
dures ----- 11582	foreign assistance appropriations,
status, United States, medical care	1964—
and family income ----- 11584	hearings ----- 2229
USSR—	laws ----- 1985, 21126
conferences and congresses on	reports ----- 2069,
public health and medical trade	2098-99, 2103, 2220, 12045
union work, news, 1310	foreign assistance appropriations,
population ----- 7166	1965—
protection developments ----- 12797	hearings ----- 19588
public health ----- 2650	reports ----- 18950, 13952, 19582
public health in national economic	grants administration under NDEA,
plan, 1964-65 ----- 12855	GAO report ----- 4763
public health organizations and	grants in aid to States, etc., actual,
conferences, news, USSR stud-	1962-63, estimated 1964,
ies ----- 1245	poster ----- 10665

# JANUARY-DECEMBER

	Entry
Health, Education, etc.—Continued	
mental retardation program in response to recommendations of President's panel.....	8790
mental retardation program, 1965.....	10686
press releases.....	3891
programs, Education Office.....	2279
regional offices, directory.....	18742, 20618
report, 1963.....	19806
scientific information activities.....	3069, 7621-22
Health, education, and welfare indicators.....	3570
Health insurance:	
aged persons, social security act amendments of 1964, hearings—benefits for salaried employees, spring 1963.....	17876, 14704
Blue Cross and Blue Shield plans, enrollment, 1940-62.....	13454
Blue Cross and other private insurance for the elderly—	
hearings.....	14121, 15787
report.....	17860
coverage, United States, July 1962-June 1963.....	18024
deceptive or misleading methods in sales, hearing.....	17861
Federal employees—	
amend act to extend benefits to temporary D.C. teachers—	
hearing.....	6522
law.....	21123
reports.....	17794, 19461
benefits act, amendments—	
law.....	8223
reports.....	469, 6286
extend coverage to United States commissioners—	
hearing.....	10338
law.....	17390
reports.....	12080, 17795
program, extend to House of Representatives folding room temporary employees, report.....	352
50 selected health and insurance plans for salaried employees, digest, spring 1963.....	9454
group benefits, extend to certain legislative employees, hearing.....	408
group, coverage of full-time State and local government employees, Oct. 1962.....	20800
Grumman Aircraft Engineering Corporation group plan, improper disposition of refunds of premiums, GAO report.....	4762
health benefit plans under collective bargaining.....	7739
independent plans, enrollment, 1946-62.....	13454
independent plans, 1963.....	15087
program for retired Federal employees, act of 1960, administrative expenses, hearing.....	8454
Health officers, and medical care administration (address).....	3097
Health Organization, World, see World Health Organization.	
Health resorts, USSR, science, physiotherapy, and therapeutic physical culture, studies.....	14462
Health Statistics, National Center, see National Center for Health Statistics.	
Heare, Gertrude:	
basic data on economy of Brazil.....	18172
establishing business in Brazil.....	4860
Hearing:	
and speech disorders, summary of progress.....	14952
apparent change in repetitive noise bursts.....	5897

	Entry
Hearing—Continued	
auditory fatigue, pure tone, central factor.....	4317
auditory medical research, USSR studies.....	11139
binaural beat perception problem.....	4318
hearing loss, hope through research.....	11557
perstimulatory adaptation relation to other short-term threshold-shifting mechanisms.....	5467
primary auditory abilities in pitch and loudness.....	5462
see also Deaf.	
Hearing defects, see Deaf.	
Hearing examiners:	
examination announcements.....	4400, 13811
amendment.....	6082
Hearn, George H.:	
remarks—	
Oct. 23, 1964.....	21299
Oct. 26, 1964.....	21302
Hearn, Jackson B.:	
basic data on economy of Burma.....	4861
foreign trade regulations—	
Ceylon.....	21090
Jordan.....	21089
Heart:	
arrest—	
and restoration of cardiac activity, USSR study.....	1264
long-range consequences, USSR study.....	1266
cardiac activity of rabbits, influence of low concentrations of light aerolons.....	5373
cardiac experiments with olitoriside and corchoroside, USSR study.....	12664
catheter for right heart and pulmonary artery implantation.....	8004
electric stimulation—	
atrio-ventricular blocks, USSR study.....	12731
USSR study.....	9357
failure and shock, causes and cure, NHI supported research grants.....	11445
handbook of heart terms.....	11446
heart research news (periodical).....	3571
inborn defects.....	20753
intercardiac operations analyzed, USSR study.....	12772
isolated, of Citellus leucurus and C. Mohavensis, effect of low temperature.....	4245
massage, external, clinical assessment, USSR study.....	1268
mitral valve, replacing with artificial tricuspid valve, USSR study.....	9178
open heart surgery, extracorporeal circulation, a renal cortex function, USSR study.....	12759
smoking and the heart.....	14957
surgery, USSR articles.....	12999
thoracic cage impedance measurements—	
cancellation of respiration effects on transthoracic impedance.....	5906
impedance production systems.....	76
see also Kinetocardiography.	
Heart diseases:	
adults, United States, 1960-62.....	18926
and drugs, review of research grants by National Heart Institute.....	11445, 16743
anesthesia for dental patient with heart disease.....	11549
angina pectoris, therapy with kvateron, Armenian studies.....	12671

# INDEX 1964

	Entry		Entry
Heart diseases—Continued		Heat transfer—Continued	
congenital heart disease, rheumatic diseases, bacterial endocarditis, etc., NHI supported research grants	16743	and flow between heated plates of finite length in free-molecule flow environment	21766
Heart sounds, <i>see</i> Phonocardiography.		and friction data for hydrogen and helium flowing in tube at surface temperatures up to 5600° R	11407
Heat:		biphenyl liquid, and vapor deposition studies at 700° and 800° F	10032
and cold effects, control	11569	boundary layer transition, effect of controlled surface roughness at Mach numbers of 4.8 and 6.0	11378
balance, climatology, USSR study	9198	conduction problems, solution by grid method	9623
energy-generation terms, mixing of coaxial streams of dissimilar fluids, analysis	9572	convection, conical shapes entering atmosphere of Venus and Mars at suborbital speeds	3026
flow, application of computers in furnace wall design	18699	convective, to liquids, influence of acoustical vibrations	8801
heat-rejection and weight characteristics—		delta-wing-half-cone combination at Mach 7 and 10	7545
fin-tube space radiators with tapered fins	7535	delta wing measurements at Mach numbers and angles of attack	18740
radiator fin-tube configurations	14898	distribution, delta wing in hypersonic flow	11418
high temperature applications, columbium and tantalum alloys	7461	distribution on 70° swept slab delta wings at Mach number of 9.86 and angles of attacks up to 90°	21772
high-temperature contents—		effects on laminar sublayer of turbulent boundary layer	20584
andalusite, kyanite, and sillimanite	7448	film boiling, coefficients obtained with hydrogen, nitrogen, and freon 113 in forced flow, correlation study	13230
muscovite and dehydrated muscovite	7449	fin-plate interference model at Mach number of 6	16679
resistance of plant organisms, interrelationship to super-faint chemoluminescence	9009	ground surface, heat exchange	19653
resistant alloys, research, USSR studies	12802	heat exchange in melting of ice, USSR study	9293
resistant steels and alloys, Soviet research	5095	heat transfer from fin-tube radiators including longitudinal heat conduction, etc.	3028
subsurface, of earth, utilization, USSR study	924	height variation of vertical heat flux near ground	20958
waste heat rejection in space, moving-belt radiator system, heat-transfer and weight analysis	16677	laminar—	
<i>see also</i> Heat transfer—Insulation.		and turbulent hydrogen, over parallel plates at 5000° R	18763
Heat capacity:		convective, cones at speeds to 24 km/sec	18786
low-temperature heat capacities and entropies at 298.15° K of—		fully developed, in thin rectangular channels with heating on broad walls except near corners	16716
akermanite, cordierite, gehlenite, and merwinite	5480	over melting plate, modified Leveque problem	10485
lead molybdate and lead tungstate	7437	slip flow—	
sulfides of arsenic, germanium, and nickel	18694	parallel-plate channel or round tube with uniform wall heating	16704
Heat exchange, <i>see</i> Heat transfer.		rarefied gas between parallel plates with unsymmetrical wall heat flux	16719
Heat exchangers:		rarefied gas in parallel-plate, etc., with uniform wall temperature	21770
high-temperature pebble-bed wind-tunnel, evaluation of refractory oxide materials	20615	measurements—	
light-weight, for rocket motor, new method used to fabricate	9554	and recovery factor of compressible turbulent boundary layer on sharp cone with foreign gas injection	9593
liquid-liquid, and vapor reheat, saline water conversion research	845	binary gas laminar boundary layers with high rates of injection	20600
thermoelectric, demonstration unit, final report	8089	flat plate and attached fins at Mach nos. of 3.51 and 4.44	14873
30 megawatt, for sodium cooled reactor system, chemical and stress analysis	5955	flat plate and attached protuberances in turbulent boundary layer at Mach numbers of 2.65, 3.51, and 4.44	20589
Heat of adsorption, low-coverage	18758-759	Mach number of 8 in vicinity of 90° interior corner aligned with free-stream velocity	18750
Heat of combustion, formation of carbides of tungsten and molybdenum	5484		
Heat of formation:			
aluminum carbide	11322		
muscovite	7436		
sulfides of manganese, iron, zinc and cadmium	16644		
zirconium carbide and hafnium carbide	18700		
Heat of vaporization, vapor-deposited tungsten coatings for MERM rocket nozzles	13135		
Heat pumps, thermoelectric, research	846		
Heat transfer:			
aerodynamic, subsonic, to surface recessed within forward stagnation region slit	3020		

	Entry
Heat, transfer—Continued	
measurements—Continued	
radiative, with thin-film resistance thermometers	9532
resistance thermometer	9531
moving belt radiator system for waste heat rejection in space	16677
nucleate pool boiling, frequency response	19238
one-dimensional analysis of thermal energy storage for solar direct-energy-conversion systems	9569
radiant—	
absorbing gases enclosed between parallel flat plates with flow and conduction	1483
absorbing gases enclosed in circular pipe with conduction, etc.	1484
2-dimensional gray-gas, in co-axial-flow gaseous reactor	7525
radiative, between planar surfaces with filleted junctures	13248
rates on blunted cylinder-flare configuration in free flight	18738
stagnation point measurements in arc-heated subsonic stream, theoretical and experimental comparison	14840
stagnation region, solutions of ionized radiating shock layer, etc.	1485
surface cooling due to bubble growth	11413
swept cylinder in vicinity of its intersection with wedge and flat plate	16678
thermal conductivity—	
argon, shock-tube heat-transfer experiments to measure	7522
vacuum gage calibration in range of $10^{-4}$ to 1 Torr lower limit, errata	3006
thermal operating performance of nuclear reactors	8076
thermally conductive metal wool-silicone rubber material, used as a shock and vibration damper	11370
two-phase, for subcooled water flowing under conditions of zero gravity, instability effect—unswept and 38° swept cylindrically blunted wedge fins	21771
vapor condensing at high velocities in small straight tubes	18739
wall temperatures in tube with forced convection, internal radiation exchange and axial wall heat conduction	21736
see also Thermal radiation.	9568
Heat treatment:	
chemical, steel, theoretical bases, USSR study	16199
niobium, USSR study	2772
reduction of postharvest decay of peaches and nectarines	13586
titanium alloy, oxygen effect on properties	4909
Heaters, see Air heaters—Unit heaters.	
Heating:	
acoustic, polar night mesosphere	1456
engineered performance standards—formulas	7870
handbook	7871
induction, application to rock deformation apparatus	13631
mechanical design, engineering manual, changes	620, 4666
nonuniform source and wall, behavior of confined fluid subjected to	1476
polar upper atmosphere, investigation	7553

	Entry
Heating—Continued	
solar, effect on built-up roofing	3053, 7581
see also Aerodynamic heating—Electric heating — Electron heating.	
Heating apparatus and supplies:	
current industrial reports	3390
equipment, Federal item identification guides for supply cataloging	12292
supplements	3473
Italy, residential equipment, outlook for U.S. sales	21087
refractory materials, apparatus for heating to high-temperatures in vacuum during tensile testing	14805
Heating plants, maintenance of heating systems, FAA handbook	10507
Heavy water:	
lattice project annual report	19234
production, annotated bibliography of selected literature	17060
Heavy water reactors, see Reactors (atomic).	
Heber, Rick, mental retardation bibliography	5634
Hebert, L. P., culture of sugarcane for sugar production in Louisiana	13580
Hebgen Lake, earthquake, Aug. 17, 1959	8769
Hedges, Bob A., real estate and insurance	20788
Hedges, Janice N., clerical occupations for women, today and tomorrow	20884
Hedges:	
ornamental—	
Central Great Plains	20914
northern Great Plains, description, care, etc.	25
Hedlund, Arthur, epicormic branching in north Louisiana Delta	18077
Hee, Kim Sook, see Kim Sook Hee.	
Heebink, B. G.:	
importance of balanced construction plastic-faced wood panels—portable apparatus for surface evaluation of furniture panels	8641
Hefferman, Maria E. A., relief	8638
Hefferman, Paul J., analysis of nonlinear noise in FDM telephony transmission over SSB-PM satellite communication system	17494
Hefflin, Leo G., fresh fruit and vegetable prices, 1963	14892
Held, Marjorie, bulgur wheat recipes	13599
Heidbreder, Elizabeth, retailing	16934
Heidmann, L. J., effects of rock mulch and scalping on survival of planted ponderosa pine	9764
Height gages, improved precision height gage	781
Height variation of vertical heat flux near ground	5503
Heimbuch, Alvin H., scintillating anion exchange resin	20958
Heimlich, Richard W.:	
Japanese electronic industries	13702
market information on electronic products in—	
Australia	21078
Denmark	21066
Mexico	21069
Spain	21083
Sweden	21067
Hein, Lester W., and wife, relief	21068
Heine, Irwin M.:	
contribution of Federal aid programs to oceanborne foreign trade of U.S., 1959-62	19539
	16620



# INDEX 1964

	Entry		Entry
Heine, Irwin M.—Continued		Helicopters—Continued	
subsidies to shipping by 11 coun-	15400	UH-1B—	
tries		equipped with XM-5 armament	13621
Heinen, Harold J., electrodeposition		kit, flight evaluation	
of molybdenum metal from	13120	with 60-gallon external fuel	13623
molten electrolytes		tanks, evaluation	
Heinrich Hertz Institute, contribu-		UH-1D, 48-foot rotor—	
tion to International Year of		equipped with XM-6E2 arma-	13620
Quiet Sun, East German transla-	7002	ment kit, evaluation	
tion		Kellet 60-gallon external fuel	13622
Heising, L. F., sampling iron ores for		tanks, evaluation	
R-N process tests	8018	variable-stability employment in	
Heiderberg Group, see Devonian		analog computer approach to	
period.		V/STOL simulation	5509
Helical tube separates nitrogen gas		vibration indicator, final report	5723
from liquid nitrogen	13171	YHU-1D category 1 performance,	
Helicopters:		stability and control tests	7968
battery service simulator	18810	YUH-1D, low temperature evalua-	
certification and operations of		tion in Arctic	49
scheduled air carriers with		Hellports:	
helicopters	21291	Army, operational and maintenance	
CH-21A airframe deformation under		facilities, engineering and de-	
dynamic crash condition	9858	sign manual	21279
CH-47 Vertol Chinook, crash in-		design, construction, and mainte-	
jury evaluation, personnel re-		nance, bibliography	6615
straint systems study	21905-906	planning, management and opera-	
H-21, seat installation, dynamic		tions, safety, bibliography	17962
test	7818	Helium:	
H-21B sideward takeoff test	7970	apparatus for detecting leaks	5495
harmonic drive, speed reducers,		content of gas mixtures, apparatus	
feasibility applications	15137	for determining	21715
helicopterborne operations, Marine		content of natural gas, low-temper-	
Corp manual	1393	ature phase equilibria data	18683
HH-43B—		cooling cone by ejection from its	
category 2 stability and control		apex at Mach 7	20604
tests	13612	desorption, drastic reduction of	
with 60° tailpipe, limited per-		warm-up rate within dewar	
formance, evaluation	1730	system	13639
high-performance electrostatic dis-		excitation functions, ion-produc-	
charging system	13493	tion rate for helium plasma	13241
high performance program, sum-		flow over hemisphere, effects of lam-	
mary report, phase 2	20859	inar-boundary-layer displace-	
multiengine, turbine engines, type		ment	9587
certification, civil air regula-		heat transfer and friction data at	
tions amendment	12360	surface temperatures up to	
pilot examination guide, private,		5600° R	11407
commercial, flight instructor	4748	hypersonic aerodynamic character-	
power transmission, investigation of		istics of winged shapes in air	
conformal gear	20856	and helium, comparison	14866
reciprocating engine crash fire-		liquid and gaseous, handling equip-	
inerting system	7816	ment design handbook	5870
rotor-blades—		mass spectrometer leak detector,	
differential pressures, stresses		use	14834
and motions as measured in		minerals yearbook chapter	14735
flight tabulation	9564	natural gases, analyses, etc.	1398, 11316
fiberglass-reinforced plastics		Panhandle gas field, Tex.	6807
test data	13495	rapid helium-air analyzer can	
static electricity charging cur-		measure other binary gas mix-	
rents, measurement program	20855	tures	7491
to determine		600-A band	13644
rotor systems—		sound transmission at low pres-	
articulated and rigid, hingeless,		ures	19180
aerodynamic aeroelastic charac-		speech during respiration of mix-	
teristics, parametric investi-		ture of helium and oxygen	5469
gation	21907	super-pure, produced by cryogenic	
nonarticulated, full-scale wind		filter method	9547
tunnel tests	16708	Helium isotopes, super-pure, produced	
scheduled air carrier certification		by cryogenic filter method	9547
and operation rules, civil air		Heller, R. C., identification of tree	
regulations amendment	12377	species on large-scale panchro-	
shore party and support team op-		matic and color aerial photo-	
erations, Fleet Marine Force		graphs	15207
manual	5459	Helme, William H., job performance	
simulation—		of EM scoring low on AFQT	15276
analysis report, study, equations		Helmets, safety, lightweight, holds	
of motion, etc.	13322, 15005	radio transmitter, receiver	13206
computational methods analog,		Helminthiasis, morbidity rate and control	
study, equations of motion,		measures in central regions of	
etc.	21826	RSFSR, USSR study	9159
computational methods digital,		Helminthologists, All-Union Society	
study, equations of motion,	21827	of Helminthologists, USSR an-	
etc.		niversary session	19962
		Helminthology, see Worms	

# JANUARY-DECEMBER

	Entry		Entry
Helminths, chemical structure and antihelminth activity, USSR study	18495	Hendrickson, Gerth E.—Continued ground water for public supply in St. Croix, V.I.	820
Help open the doors	11266	Hendrix, V. V., operational documentary photography manual	8058
Helsinki, Finland, colloquium on brazing of metals at 16th congress, 1963	18257	Henkel, Anne S., relief	12036, 15637, 17188
Helvey, J. D., rainfall interception by hardwood forest litter in southern Appalachians	14332	Henley, John W., recommended veneer grades for development of hardwood veneer log grades	8673
Hely, A. G., streamflow characteristics, etc., in Delaware River region	2422	Hennig, Charles E., petroleum refineries in U.S., Jan. 1, 1964	14742
Hem, John D., deposition and solution of manganese oxides	6817	Hennigh, Keith E., field wind weighting and impact prediction for unguided rockets	7532
Hematite, experimental conversion to magnetite with solid reductants	5485	Henning, Allan B.: Doppler tracking method using simple CW beacon	9585
Hematology, see Blood.		wind-compensation method and results of its application to flight tests of 12 Trailblazer rocket vehicles	9566
Hembree, C. H., chemical quality of surface waters and sedimentation in Grand River drainage basin, N. and S. Dak.	18148	Henning, John F.: addresses—	
Hemiptera, subfamily Mesirinae of aradidae, notes on National Museum collection	7603	Jan. 23, 1964	7363
see also Lace-bugs		Sept. 21, 1964	20429
Hemisphere, Eastern, high-sulfur crude oils, hydrocarbon-type relationships with oils of Western Hemisphere	21712	Henry, E. William: addresses—	
Hemisphere, Northern: daily synoptic weather maps—	3398-99	Nov. 20, 1963	2308
edge of polar plateau for galactic cosmic rays and their charged albedo	9599	Apr. 7, 1964	10514
weather maps, for IGY	5758, 7842, 9880, 11688, 13527-528	July 7, 1964	15887
Hemisphere, Southern: citrus producers and markets—	765	Oct. 2, 1964	21295
edge of polar plateau for galactic cosmic rays and their charged albedo	9599	Henry, James P., results of Project Mercury ballistic and orbital chimpanzee flights	5501
Hemisphere, Western: agricultural situation, 1964	6556	Henryetta, Okla., travel service center, economic feasibility, ARA study	11820
food balances, 1959-61	17907	Henshaw, Lerner B., mechanism of autoregulation in intact kidney	13734
high-sulfur crude oils, hydrocarbon-type relationships with oils of Eastern Hemisphere	21712	Henson, P. R., lespedezas, culture and use	11755
labor organizations, directory	21376	Hepatic functions, see Liver.	
United States Army in World War II, guarding United States and outposts	11312	Hepatolenticular degeneration, copper metabolism variation, USSR study	16343
Hemlock, western, seasoning and surfacing degrade in kiln-drying in western Washington	8655	Hepler, Chester W., training disadvantaged groups under manpower development and training act	11246
Hemodialyzers, see Artificial kidney.		Hepper, James P., world magnetic survey	7518
Hemodynamics, see Blood.		Herald of Academy of Medical Sciences (USSR periodical): translations	2509, 5025, 11018, 14549, 14582
Hemoglobin: biochemistry of abnormal human, control mechanisms for antibody formation, etc., theories—	9006	translations	1096, 2542, 5013, 5225, 7264, 9255, 12622, 12717, 13016, 16233, 18514, 20085, 21567.
comparative physiology and biochemistry, USSR translation—	18517	Herald of higher education (USSR periodical): translations	4987
types in young sturgeons—	2638	Herbarium, see National Herbarium.	
use in culture media for Trypanosoma cruzi, USSR study	2477	Herbicides: aquatic, in irrigation water, tolerance of certain crops	5863
Hemopolesia, see Blood.		chemical control of weeds in crimson clover	7950
Henderson, William P., longitudinal stability characteristics of low-aspect-ratio wings having variations in leading- and trailing-edge contours	20577	development and study, USSR conference, report	21507
Hendricks, E. L., compilation of records of surface waters of United States, Snake River basin	4821	injuriously effect on fish and wildlife, prevent or minimize, report—	10216
Hendricks, Robert C., initiation of cooling due to bubble growth on heating surface	11413	see also 2, 4-DP.	
Hendrickson, Gerth E.: geochemistry of natural waters of Blue Grass region, Ky.	14350	Hercules Powder Co., Bacchus Works, unnecessary cost to Government through leasing electronic data processing systems by Defense Dept., GAO report	19783

# INDEX 1964

	Entry		Entry
Heredity:		Hickam Air Force Base, Hawaii, employees, relief.....	324, 6430, 8211
effects of radiation on hereditary molecular structures, USSR study.....	1008	Hickey, Wayne C., jr., tamper proof rain gages.....	6749
molecular genetics and effect of radiation, USSR studies.....	4895	Hicks, Raymond M., spanwise variation of leading-edge sweep effects on lift, drag, and pitching moment of wing-body combination.....	9596
Hering, Wayne S., ozone-sound observations over North America.....	7966	Hicks, Steacy D., physical oceanographic studies of Narragansett Bay, 1957 and 1958.....	2343
Herman, Leon M., postwar expansion of Russia's fishing industry.....	12258	Hides and skins, <i>see</i> Leather, hides, and skins.	
Hermann, Frank V., population forecasting methods.....	20776	Hiemstra, Stephen J., rising depreciation of assets in agricultural marketing firms.....	4612
Hernandez, Gabriel A. S., <i>see</i> Sanchez, Gabriel A.		Hiester, N. K., operating capabilities of electric-arc reentry environment simulators.....	18723
Herrick, Joseph F., jr., apple packing and storage houses, layout and design.....	4207	Hietanen, Anna:	
Herring:		anorthosite and associated rocks in Boehls Butte quadrangle and vicinity, Idaho.....	805
immature, tagging method.....	2342	Idaho batholith.....	4785
Maine, exploratory fishing.....	8620, 10571	metamorphism of Belt series in Elk River-Clarkia area, Idaho.....	4784
Passamaquoddy region, fishery.....	21320	Hietbrink, Bernard E., X-irradiation influence on microsome oxidase and reductase activity in livers of young male rats.....	13651
Hersch, Martin, interchanging propellants effect on rocket combustor performance.....	7536	Higbie, Kenneth B., metallurgical technology review.....	11345
Hershey, Lloyd A., ground water investigations in lower Cache la Poudre River basin, Colo.....	6821	Higgins, C. C., dynamic pressure and thrust of cold jets discharging from exhaust nozzles designed for VTOL downward suppression.....	11397
Hervey, John G., Federal textbook on citizenship, our Constitution and Government.....	18158	Higgins, E. Arnold, effects of tranquilizer on body temperature.....	5998
Herzbrun, Phillip I., English teaching study unit, Ralph Bunche, world servant.....	5735	Higgins, E. Eugene:	
Herzog, B., vibration of buckled circular plates.....	7568	classroom facilities planning aids.....	14178
Hess, Wilnot N.:		science facilities planning aids.....	14196
effects of high altitude explosions.....	20588	Higgins, James W., bituminous coal mining, labor market developments.....	4658
symposium on physics of solar flares.....	20537	Higgins, Ralph V., five-spot water-flood, two-phase flow performance.....	1433
Hester, O. C., market potentials for modified edible fats and oils.....	11771	High energy propellants, continuing bibliography.....	13159
Hestianic acid, biologically resistant pigment from aerobic waste digesters.....	1743	High pressure regulating system prevents pressure surges.....	14801
Heterogeneous reactors, <i>see</i> Reactors (atomic).		High school pupils, <i>see</i> Youth.	
Heterophoria, alcohol and hypoxia effects.....	7997	High school students, <i>see</i> Students.	
HEW, <i>see</i> Health, Education, and Welfare Department.		High schools:	
Hewell, Grace L.:		debate topics, preparation and printing of compilations of materials.....	4420
addresses.....		law reports.....	2102, 2200
Mar. 21, 1964.....	8784	debates, 1964-65.....	12167
May 17, 1964.....	12533	employment of high school graduates and dropouts in 1963.....	14709
Hewes, Donald E., lunar gravity-simulation for locomotion studies.....	9581	enrollment size and educational effectiveness.....	8483
Hewlett, Richard F.:		enrollment, teachers, and school housing, fall 1963, statistics.....	15844
application of simulation in evaluating low-grade mineral deposits.....	18685	graduation, median age, 1960 and 1950.....	1820
polynomial surface fitting using sample data from underground copper deposit.....	18704	industrial arts courses, grades 7-12, preliminary, report.....	17916
simulating mineral deposits using Monte Carlo techniques, etc.....	16643	inservice mathematics education, promising practices for secondary school teachers.....	19630
Hexokinase, activity of brain and muscle tissue of rats, effect of fractional X-ray irradiation, USSR study.....	16308	secondary summer school, mathematics, offerings and enrollments, 1962.....	570
Heyl, Allen V., oxidized zinc deposits, Colorado.....	21349	subjects, offerings and enrollments, 1960-61, summary.....	14198
HHFA, <i>see</i> Housing and Home Finance Agency.		USSR, social science, textbook for secondary schools.....	12945
HHFA program guide.....	8191	High temperature materials, <i>see</i> Refractory materials.	
Hibernation:			
ground squirrels.....			
Alaskan, blood variations.....	19142		
Alaskan, influence upon experimental infections.....	19144		
effect of low temperature on isolated hearts of <i>Citellus leucurus</i> and <i>C. Mohavensis</i> .....	4245		
mammals and birds.....	4246		
mammals, bibliography.....	19145		

# JANUARY-DECEMBER

	Entry
Higher education, <i>see</i> Colleges and universities.	
Highlights from survey of residence and migration of college students, fall 1963.	10465
Highlights of Architectural & Engineering Development Program of Civil Defense Office.	11927
Highlights of legislation on aging, bills affecting older persons introduced 88th Congress.	5761, 11715, 15168
Highway bridge engineers, opportunities in Public Roads Bureau	1569
Highway engineers:	
aids, suggested training program	14188
opportunities in Public Roads Bureau	1569
Highway machinery, <i>see</i> Road machinery.	
Highway planning notes.	3573
Highway safety, <i>see</i> Safety of life.	
Highways, <i>see</i> Roads and highways.	
Higley, L. W., jr., uranium alloyed steels, their fabrication and mechanical properties	9520
Hillbrand, Howard C., comparison of block shear methods for determining shearing strength of solid wood.	12449
Hilding, Winthrop E., heat transfer studies of vapor condensing at high velocities in small straight tubes	21736
Hildreth, A. C., ornamental hedges for Central Great Plains.	20914
Hill, Elmer D., testimony, hearings.	2244
Hill, G. W., method of general planetary perturbations, modification	14897
Hill, James E., review of mining technology	13136
Hill, Ralph L., testimony, hearings.	6526
Hill, Robert L., remarks, Aug. 3, 1964	15375
Hill, Stephen D., high-level gamma-ray dosimetry at Albany cobalt 60 facility.	14747
Hill, Thomas E., jr., polyethoxylated amines as flotation collectors for slimed lead minerals.	9509
Hill-Burton program:	
extension and revision—	
hearings.	8387, 14153
law	17302
reports	10217, 10256, 15731
hospital and medical facilities series under Hill-Burton program.	3099-
3100, 7696, 9718, 11560, 13404-	
405, 20757	
progress report, July 1, 1947-June 30, 1963	3098
project register	3574
Hiller, Charlotte H., pattern of variation of fibril angle within annual rings of <i>Pinus attenuata</i>	18053
Hills, Keith, relief.	12034, 14045, 17172
Hills, Orin A.:	
cantaloup insects in Southwest, how to control them	13585
insects affecting sugarbeets grown for seed	1695
Hillsman, Gladys M., now I am a person	13785
Hillson, Louise H., establishing business in Malaysia.	18175
Hinds, Martha E., computer program for ionospheric mapping by numerical methods	3048
Hinshaw, Lerner B., intrarenal hemodynamic changes following acute arterial occlusion.	5997

	Entry
Hinson, William F., jet-pluming interference by computer simulation of measured flight motions of 2 RAM A fourth stages.	3016
Hinteregger, H. E.:	
environmental research papers.	20960
solar XUV, from 310Å to 55Å.	20965
Hired farm workers, <i>see</i> Farm labor.	
Hiring practices, <i>see</i> Employment.	
Hiroshima, Japan, nuclear bomb survivors, dosimetry program.	15279
Hirota, Lloyd K., relief.	15652
Hise, Barbara H., investment factors in Turkey	2459
Hispanic Foundation, bibliographical series	1391, 5456, 13090
Histidinemia, study.	19309
Histogenesis and age change in epithelium of large intestine.	18353
Histopathology—	
mice fed irradiated food.	110
pollomyelitis anterior subacuta.	16066
Historians:	
all-Union conference, Dec. 18-21, 1962, proceedings.	21613
employment outlook.	9409
Historic American Buildings Survey, general information.	1513
Historic Preservation in United States, National Trust for, <i>see</i> National Trust for Historic Preservation in United States.	
Historic sites:	
national survey of sites and buildings, general information.	14975
registry of national historic landmarks	14976
<i>see also</i> names of historic sites.	
Historic structure report.	7614
Historical statistics on governmental finances and employment.	19287
announcement and order form.	19283
History:	
AMC historical studies.	20987
American—	
grants for documentary source material—	
hearing	10422
law	17242
report	12221
publications, price list.	3095
writings, 1956—	
departmental edition.	11815
document edition.	12017
historical study series.	7681, 13384
History and Technology Museum, papers—	
index	1509
title page, etc.	1510
teachers, advanced study, national defense institutes, manual.	21267
world 2, study guide.	6537
<i>see also</i> Naval history— <i>also</i> names of departments, etc.— <i>also</i> subjects.	
History and Technology Museum:	
contributions from—	20654, 21796, 21798, 21800
dedication	9649
Medical Sciences Division, history.	21801
papers, index.	1509
papers on history, title page, etc.	1510
science and technology papers, title page, etc.	1511
Hites, Donovan, Guthrie, Minn., accident	10715
Hiteshue, Raymond W.:	
hydrogasification of high-volatile A bituminous coal.	7453
pressure carbonization of high-volatile A bituminous coal to produce high-BTU gas.	11330

Do not order from index; see indicated entry

Page 329



# INDEX 1964

Entry	Entry
Hitler, Adolph, former headquarters now tourist attraction in Poland.....	9030
Ho, Elsie K. Y., make each person count, guide for nursing home administrators.....	11563
Hobbies: construction and operation of hobby craft shops.....	5582
publications, list.....	16828
Hobbs, Dale Z., methods used in pre- paring boron.....	18132
Hobbs, Harold W., hydrologic data for experimental agricultural watersheds in United States, 1956-59.....	4213
Hobson, Carol J.: fall 1963 statistics on enrollment, teachers, and schoolhousing, public elementary and sec- ondary day schools.....	15844
preliminary report on statistics of State school systems, 1961-62.....	592
statistics of State school systems, 1961-62.....	19640
Hoe tap (North Vietnam periodical): translations.....	898,
1160, 2606, 2779, 2918, 5188, 6877, 7318, 7322, 7336, 9040, 9264, 9350, 10859, 10883, 11006, 12652, 16005, 16057, 18221, 19979, 20003, 20319.	
Hochbaum, Godfrey M., modern theories of communication.....	4360
Hod carriers, employment outlook.....	9420
Hodge, Ward F., magnetic field en- countered by satellites in circular orbits.....	7501
Hodges, Earl F.: consumption of feed by livestock 1940-59.....	5856
livestock-feed relationships, 1909- 63.....	40
Hodges, Luther H.: addresses, etc.....	224
Nov. 9, 1963.....	227
Nov. 14, 1963.....	225, 441e
Nov. 18, 1963.....	229
Nov. 19, 1963.....	1854
Dec. 12, 1963.....	1853
Dec. 16, 1963.....	1856
Dec. 17, 1963.....	6118
Feb. 5, 1964.....	6116
Feb. 14, 1964.....	6117, 6119
Mar. 5, 1964.....	6115, 6120
Mar. 6, 1964.....	8183
Mar. 11, 1964.....	8181
Mar. 26, 1964.....	8180
Mar. 31, 1964.....	8182
Apr. 9, 1964.....	10124
Apr. 21, 1964.....	10125
Apr. 24, 1964.....	11963
May 15, 1964.....	11966
May 20, 1964.....	11964
May 21, 1964.....	11965
May 24, 1964.....	11973
June 7, 1964.....	13817
June 9, 1964.....	13819
July 3, 1964.....	13818
July 11, 1964.....	15367
July 22, 1964.....	15366
Aug. 11, 1964.....	17156
Sept. 10, 1964.....	19350
Sept. 23, 1964.....	19352
Sept. 29, 1964.....	19351
Sept. 30, 1964.....	19355
Oct. 5, 1964.....	19349
Oct. 12, 1964.....	19348
Oct. 14, 1964.....	19343
Oct. 15, 1964.....	19348
1964 outlook, and 1963 year-end ec- onomic review.....	1855
Hodges, Ronald W., review of North American moths of family Walshillidae.....	9651
Hodgkin's disease, USSR studies.....	1164
Hoekstra, P. E., Virginia pine re- sponse to release.....	2384
Hoertel, Frederick W., vapor deposi- tion of tungsten on MERM rocket nozzles.....	13135
Hoess, E. A., synthesis of polyamides containing 8-triazine rings.....	13370
Hofacker, Gerhard, relief.....	19540
Hoffinger, Erich, relief.....	10874
Hoffman, Gertrude, 4-H home fur- nishings program.....	5849
Hoffman, Glenn L., parasites of fresh- water fish.....	6716
Hoffman, Robert B., fuel fabrication processes used in high power density program.....	8055
Hoffmann, Carolanne H.: disability among persons in labor force.....	7706
health insurance coverage, United States, July 1962-June 1963.....	18924
Hoffmaster, Merideth R., testimony, hearings.....	6526
Hog cholera: eradication.....	11745
progress report, 1963.....	16967
questions and answers.....	16967
Hogenson, G.M., geology and ground water of Umatilla River basin, Oreg.....	8777
Hogerton, John F.: atomic fuel.....	8097
atomic power safety.....	17068
Hogs, see Swine.	
Holists, heavy loads, buckle joins web straps quickly, adjusts easily.....	14827
Hokanson, John R., basic data on econ- omy of Liberia.....	12553
Holanda, Raymond, calibration of thermal-conductivity vacuum gauge in range of 10 <sup>-4</sup> to 1 Torr by means of volume-ratio cali- bration system, errata.....	3006
Holbrook, Ariz., soil survey of area.....	13456
Holder, Shelby H., Jr.: costs of electric power and fuel for driers in cotton gins, Arkansas and Missouri.....	2261
reclaiming and marketing cotton gin motes.....	14169
Holding companies, act of 1935, re- leases, SEC.....	3575
see also Banks and banking—Pub- lic utilities.	
Holding patterns criteria, change.....	4680
Holeski, Donald E., three stage 4.54- inch-mean-diameter reverse- flow reentry turbine.....	1475
Holidays: Federal, consideration, authoriza- tion, report.....	6452
gift list for reader.....	20735
Holla Bend National Wildlife Refuge, birds, list.....	8608
Holleman, Euclid C., piloting per- formance during boost of X-15 airplane to high altitude.....	11412
Hollenberg, A. H., instruction in farm mechanics, suggestions for de- veloping training programs in vocational agriculture.....	15849
Holley, Irving B., Jr., buying aircraft, material procurement for Army Air Forces.....	20462
Holliday, R. W.: chromium.....	20470
molybdenum.....	20493
Hollomon, J. Herbert, talk, Mar. 7, 1964.....	8190

# JANUARY-DECEMBER

Entry	Entry
Hollon, Dan H., household consumers' acceptance of instant sweetpotato flakes -----	18588
Holloway, Irmagene N., fireproof your family -----	21849
Holloway, Paul F., controlled surface roughness effect on boundary-layer transition and heat transfer -----	11378
Holly, gallberry seed, some observation on germination -----	18073
Holm, Henrietta, agriculture in Tunisia -----	8472
Holmes, Ann C.: basic data on economy----- Norway -----	14387
Sweden -----	685
foreign trade regulations of Iceland -----	21081
Holmes, Wesley T., II, electric smelting of titaniferous iron ores from Alaska, Montana, and Wyoming -----	18681
Holms, Arthur G., micrometeoroid penetration experiments -----	9565
Holstein cattle, <i>see</i> Cattle.	
Holt, Dean C., titanium placer resources in western Montana -----	7444
Holtgrewe, Marian M., guide for public health nurses working with mentally retarded children -----	11918
Holton, Richard H.: addresses----- Mar. 12, 1964 -----	13825
Apr. 6, 1964 -----	8189
Apr. 22, 1964 -----	10133
June 2, 1964 -----	11967
June 16, 1964 -----	13820
July 7, 1964 -----	13823
Sept. 11, 1964 -----	19365
Holum, Kenneth: addresses, etc.----- Nov. 18, 1963 -----	840
Nov. 23, 1963 -----	844
Hom You Fong, <i>see</i> Woo You Lyn.	
Home and Community Committee, President's Commission on Status of Women, report -----	5638
Home businesses, <i>see</i> Business.	
Home care, <i>see</i> Medical care.	
Home economics: consumer information, price list-----	21842
degree-granting colleges, etc., 1963-64, list -----	17915
family economics review -----	3455
home and garden bulletins -----	28
1701, 4203-4, 5828, 7919-23, 9943-44, 11758-762, 16953-955, 19074-79, 20920-923.	
home furnishings program, 4-H, objectives, etc. -----	5849
homemakers----- assistant, suggested training program -----	15847
estimates of how long food on hand could be made to last, civil defense study -----	15215
5-cent commemorative postage stamp -----	20725
publications, list -----	4830
visiting, suggested training program -----	15860
homemaking around the world -----	10709
homemaking, status of women, report -----	5638
housekeeping in Indian boarding and day schools -----	833
institutions granting bachelor's or higher degrees, 1961-62 -----	4623
publications, price list -----	1550
rehabilitation of physically handicapped in homemaking activities, proceedings of workshop -----	3186
research reports -----	19080-81
Home economists, employment outlook -----	9395
Home freezers, <i>see</i> Freezers.	
Home labor: fair labor standards act, employment of homeworkers in industries -----	11682
industrial homework, State laws regulating, summary -----	11262
Home loans, <i>see</i> Loans.	
Home Mortgage Corporation, establish, hearings -----	526
Home rule, hearings -----	10500
Homemaker services, <i>see</i> Visiting housekeepers.	
Homemakers, <i>see</i> Home economics.	
Homemaking, <i>see</i> Home economics.	
Homes: construction, maintenance, community development, publications, price list -----	7686
cooling equipment -----	20922
family, day care for your child -----	21043
FHA insured homes, expenditures to correct defects, hearings -----	2233
insured mortgage transactions----- FHA data for selected housing areas -----	4693, 14241
FHA data for States -----	4694, 14242
FHA trends -----	3505
mortgage debt and financing activity -----	3446
mortgage foreclosures in 6 metropolitan areas -----	10669
mortgage insurance, FHA regulations -----	17974
amendments -----	2320, 17975
4693, 6633, 14243, 17975	
mortgage interest rates and terms-----	3576
mortgage programs, mortgagee's handbook, FHA manual, revision -----	8549
mortgages, estimated debt and financing activity, 1963 -----	8544
planning bathrooms -----	20921
plumbing repairs -----	19072
safe use of pesticides -----	11777
SBA disaster loans -----	20785
school-home cooperation in low-income neighborhoods in preparing city child for his school -----	15854
school-home partnership in depressed urban neighborhoods -----	10471
shopping, publications, list -----	15038
<i>see also</i> Housing.	
Homes (institutions), <i>see</i> Nursing homes.	
Homesteads, homesteading past and present -----	9481
Homing guidance, infrared equipment for missile homing, USSR study -----	12904
Hominy grits, corn, recipes for schools and institutions -----	5793
Homme, Vernon E., producing titanium lower chlorides -----	9409
Homonoff, Harold, materials for thermionic converters -----	11496
Homopolesis, <i>see</i> Blood.	
Homoptera, general catalog -----	11744
<i>see also</i> Leafhoppers.	
Homotransplantation, <i>see</i> Transplantation (physiology).	
Homotransplants, <i>see</i> Transplantation (physiology).	
Honduras, foreign trade regulations -----	8828
Honey: market news, semimonthly report -----	3577
some ways to use it -----	28
Honey bees, <i>see</i> Bees.	
Honey Creek basin, hydrologic studies of watersheds, Collin and Grayson Counties, Tex., 1953-59 -----	15067

# INDEX 1964

	Entry		Entry
Honeycomb structures, <i>see</i> Laminated materials.		Hornworms, effect of light traps on populations in large areas.	11
Hong Kong:		Horology, <i>see</i> Clocks and watches.	
economy, basic data.	15984	Horowitz, Milton W., James J. Gibson on visual perception, analysis of selected papers.	15002
establishing business.	8817	Horse trailers, <i>see</i> Trailers.	
fishing industry, 1962-63.	6720	Horsebrush, livestock poisoning in Western States, reducing losses.	20915
foreign trade regulations.	18174	Horsepower, power equipment in manufacturing industries, census of manufactures, 1963.	11891
market for U.S. products, international commerce, supplement.	15982	Horticultural Crops Branch, AMS, publications, list.	4186
trade with, trade mission report.	4865	Horticulture, tropical and sub-tropical, handbook.	14398
travel information for Chinese going to Communist China.	9319	Horton, Jerome S.: deciduous tamarisk.	12469
Honolulu, Hawaii, consumer expenditures and income, 1961.	1370-71	guide for surveying phreatophyte vegetation.	9932
Honolulu International Airport, overseas visitor survey, Nov. 1962.	11673	Horton, W. H., buckling load, imperfections, main contributor to scatter.	19000
Honolulu Magnetic Observatory, magnetograms and hourly values.	4403, 19341	Horwitz, Soils, nomination, hearing.	14127
Honolulu Memorial National Cemetery of Pacific, general information.	19195	Hose:	
Honor (military), <i>see</i> Military ceremonies, honor and salutes.		containing liquid under pressure, special pliers to connect.	9551
Hoods (laboratory), <i>see</i> Laboratory apparatus and supplies.		Federal item identification guides for supply cataloging.	12292
Hooker County, Nebr., soil survey.	7747	supplements.	3473
Hooks, threading hook facilities recovery of heavy loads.	20563	identification of hose lines for aircraft, missile, and space systems, military standard.	21255
Hooper, Edward T., Jr., microwave parametric amplification.	5620	Hospital administrators, employment outlook.	13049
Hoover, Ethel, food distribution changes and CPI.	7419	Hospital apparatus and supplies: built-in equipment, check list.	7696
Hoover, Herbert, 90th birthday commemoration, Aug. 10, 1964, proclamation, law.	17262	civil defense emergency hospital—central supply section.	11559
Hopkins, D. M., geology of Imurak Lake area, Alaska.	2416	operation of generators.	20756
Hopkins, Phillip S., masters of space.	21868	equipment planning guide.	13405
Hopkins, Ralph L.: extraction of sulfides from petroleum fractions by conversion to sulfonium salts.	13134	Hospital Corps, Navy: defense against chemical agents, handbook chapter.	1395
improved procedure for synthesis of thiolacetic acid.	18701	handbooks.	1395, 2979, 3565
Hopkins, Robert E., optical design, military standardization handbook.	561	Hospital profiles, decade of change 1953-62, non-Federal short-term, general hospitals.	20757
Hopkins County, Tex.: inclusion within Paris division of eastern district for district courts in Texas—law reports.	17371, 6285, 17738	Hospitalization insurance: group, coverage of full-time State and local government employees, Oct. 1962.	20800
Hops, stocks.	9845, 21895	maternity care utilization and financing, U.S. data, 1950-62.	16837
Horalek, Eva, relief.	12041	Hospitals:	
Horalek, Mary, relief.	12041	civil defense emergency—central supply section.	11559
Horesik, Tibor, relief.	6157, 6401	custodian's handbook.	15053
Hord, Warner H., Jr., environmental test program for Ariel I.	7514	laboratory section.	21851
Horling, John W., relief.	438, 1872	operation of generators.	20756
Hormones:		pre-positioned and training, storage locations.	15052
sex hormones, effect on acute radiation sickness, USSR study.	1254	storage structures.	5654
suprarenal, effect on radiation sensitivity of chromosomal apparatus of epithelial cells of mouse cornea, USSR study.	2890	X-ray section.	7695
use in medicine, USSR study.	18293	design of facilities for long-term patients, references.	3100
USSR study.	18388	discharges, U.S.— July 1962-June 1963, current estimates.	
Horn, Arthur G.: Lake States pulpwood cut continues to climb, Wisconsin takes lead in pulpwood production.	18068	July 1963-June 1964, current estimates.	21859
pulpwood production in Lake States counties, 1962.	6750	for rural people.	26
Horn, Richard A., methods used at Forest Products Laboratory for preparing cross sections of paper and paperboard.	12443	general— labor-delivery unit, planning.	11560
Horne, Walter B., phenomena of pneumatic tire hydroplaning.	1470	psychiatric facilities, mentally ill patients.	7588
Horns (radio), <i>see</i> Antenna horns.		hospital and medical facilities— Hill-Burton program— equipment planning guide.	13405
		extend construction program— hearings.	8387, 14153
		law.	17302
		reports.	10217, 10256, 15731

	Entry
<b>Hospitals—Continued</b>	
hospital and medical facilities—continued	
Hill-Burton program—Continued	
hospital files, decade of	
change 1953-62	20757
progress report, July 1, 1947- June 30, 1963	3098
projects register	3574
series	3099-3100
7696, 9718, 11560, 13404-13405, 20757	
Navy design manual, changes	3200
hospital and medical facilities se- ries, health professional educa- tion, medical education plan- ning	13403, 16839
hospital engineering, career oppor- tunities, Veterans Administra- tion	20870
industry wage survey	16611
medical education facilities, plan- ning considerations and archi- tectural guide	13403
medical facilities available to Fed- eral employees injured in per- formance of duty	15861
outpatient services— clinic procedures surveying guide	97183
facts and trends	13404
patient care, methods of studying— procedure, phenylketonuria detec- tion in newborn infant	15061
Public Health Service— grants for research	15332
pharmacy residences	9719
research in hospital use, progress and problems, conference re- port	3099
resident in hospital administration, examination announcement	6078
stroke rehabilitation program, in- service training for medical care facility personnel in Ore- gon	11561
see also Mental Institutions—Mili- tary hospitals—Veterans hos- pitals—also names of hospitals or places where located.	
Hot Springs National Park, general information	9656
Hotchkiss, Neil, pondweeds and pond- weedlike plants	15917
Hotel housekeepers, aide, suggested training program	15848
<b>Hotels:</b>	
employees, coverage under Fair labor standards act, provide, hearings	19507
hotel occupations, employment out- look	9446
industry wage survey	18640
Hotz, Preston E., geology and mineral deposits, Osgood Mountain quadrangle, Nev.	8768
Houbolt, John C., dynamic response of airplanes to atmospheric turbu- lence	13257
Houglan, Marilyn J., mentally re- tarded contribute also	13785
<b>Hours of labor:</b>	
employer expenditures for selected supplementary compensation practices for production and related workers, manufactur- ing industries, 1962	20443
employment and earnings (periodi- cal)	3433
fair labor standards act— application to forestry or logging operations	16913
construction industry, coverage	11678
hours worked	1653, 15146, 15149

	Entry
<b>Hours of labor—Continued</b>	
fair labor standards act—Continued	
motor carriers employees, exemp- tion from maximum hours, code of Federal regulations	7839
overtime compensation under	9875
overtime pay, basic rates for computing	7836, 9877, 20875
overtime penalty rate, increase, hearings	6352, 17645, 19505
reduce maximum workweek, hearings	6352
reference guide	13512
general coverage of fair labor stand- ards act provisions	11677
import-export overtime law, clarify, report	15514
labor force monthly report	3745
maximum under Fair labor stand- ards act, exemption of employ- ees of motor carriers	19014
output per man-hour, industry in- dexes	2969
overtime protection, extend fair labor standards act coverage, hearings	15586
shorter workweek, selected refer- ences	1362
supplementary compensation prac- tices for production workers, employer expenditures, ment- packing and processing indus- tries, 1962	14706
union— building trades	13071
local transit operating employ- ees	11285
motortruck drivers and helpers	14701
printing industry	14702
wholesale grocery business, Federal wage-hour law application	1652
Housatonic River:	
flood control, engineer report— departmental edition	15868
document edition	15410
House Administration Committee, House:	
calendar	3650
hearings	14005
investigations and studies, expenses, report	6308
reports	325
368-370, 373-374, 379, 2031, 2036, 2083-2085, 2101-2102, 4456, 4471-4476, 6272, 6306- 6318, 8325-8326, 12069-12073, 15538, 17508-17513, 17549, 17551-17555, 17560-17569, 17584-17591, 19475-19482, 21189.	
House bills	274
1988, 4426, 6194, 8241, 10152, 12015, 13918, 15402, 17444, 19439.	
House documents	275-288
1989-1997, 4427-4444, 6195- 6224, 8242-8261, 10154-10195, 12016-12030, 13919-13926, 15403-15421, 17445-17473, 19440-19453, 21163-21169.	
House files, see Files.	
House of Representatives:	
appropriations, 1964, legislative— law	1976
report	337
appropriations, 1965, legislative— amendments	10185
hearings	8365, 15794
law	17313
reports	8334, 15699
calendars and history of legisla- tion	3642
candidates, campaign expenditures, special committee to investi- gate—	



# INDEX 1964

	Entry
House of Representatives—Continued	
candidates, campaign—Continued	
expenditures, pay from contin-	
gent fund, report.....	17509
report.....	15483
classification of certain positions—	
law.....	21144
reports.....	17549, 19486
clerk, report, omitting names of	
witnesses—	
law.....	21148
report.....	19576
contingency fund, certain payments,	
report.....	17587
delegation to conference of NATO	
parliamentarians, Paris, 1963,	
report.....	12097
delegations to 4th meeting of Mex-	
ico-United States Interparla-	
mentary Group, report.....	13963
doorkeeper, employ additional door-	
men, report.....	8326
folding room temporary employees,	
extend civil service retirement	
and insurance benefits to, re-	
port.....	352
journal, 88th Cong., 1st sess.....	8239
legislative employees, extend ben-	
efits of civil service retirement	
and group life and health in-	
surance programs, hearing.....	408
majority and minority rooms, ex-	
empt from D.C. sales and use	
taxes, report.....	17618
Members—	
clerk hire basic allowance, in-	
crease, report.....	17589
election, redistricting, proposals,	
hearings.....	17657
office expenses outside District of	
Columbia, reimburse, report.....	17590
post office, additional clerks, report—	
postmaster, employ additional mail	
clerks, report.....	8325
seal and press, new, report.....	2083
Sergeant at Arms, employ addi-	
tional police, report.....	12069
telephone directory, June 1964.....	12014
House plants, see Plants.	
House reports:	
private bills.....	289-324,
1998-2029, 4445-51, 6225-70,	
8262-84, 10196-204, 12031-44,	
13927, 15422-481, 17474-506,	
21170-185.....	
public bills.....	325-385,
2029-2103, 4452-84, 6271-6334,	
8285-8351, 10205-281, 12045-	
113, 13928-985, 15482-577,	
17507-628, 19454-494, 21186-	
198.....	
House trailers, see Trailers.	
Household appliances:	
consumer information, price list... 21842	
Federal item identification guides	
for supply cataloging.....	12296
supplements.....	3477
gas, U.S. market in—	
Japan.....	145
Netherlands.....	146
Sweden.....	147
Household employees, see Servants.	
Household equipment, see Household	
goods.	
Household goods:	
and commercial furnishings and ap-	
pliances, Federal item identifi-	
cation guides for supply cata-	
loging.....	12296
supplements.....	3477

	Entry
Household goods—Continued	
Armed Forces members, advance re-	
turn—	
hearing.....	17866
law.....	17290
report.....	15740
brought into U.S. under Govt. or-	
ders, exemption from duty, ex-	
tend—	
law.....	13873
reports.....	8349, 12239
consumer buying intentions.....	183,
8132, 11907, 17108	
electric housewares, current indus-	
trial reports.....	1812, 15308
4-H home furnishings program, ob-	
jective, etc.....	5849
furnishings, maintenance and re-	
pair, Navy policy, procedures,	
etc.....	15180
military personnel, unnecessary	
costs for temporary storage,	
GAO report.....	2408
retail trade, employee earnings,	
home furnishings, and equip-	
ment stores.....	13060
shipment improperly classified as	
professional items by military	
personnel, Army Dept., GAO	
report.....	8732
see also Furniture.	
Household workers, see Servants.	
Households:	
by type, 1964, population character-	
istics.....	15314
employment and unemployment sta-	
tistics, concepts and methods	
used.....	16589
Insecticide recommendations for	
1964.....	7910
correction.....	15205
storage study.....	4697
Housekeepers, see Hotel housekeep-	
ers.	
Housekeeping, see Home economics.	
Houseparents, what houseparents	
should know about problems of	
children in their care.....	11921
Houses:	
apple packing and storage, layout	
and design.....	4207
electrically heated and cooled insu-	
lation, proceedings of confer-	
ence.....	15198
flooded, first aid.....	20908
household storage study.....	4697
Italy, residential heating equip-	
ment, outlook for U.S. sales... 21087	
planning aids (series).....	16960-961
prefabricated, North Korean expe-	
riences.....	5122
private one-family, labor and ma-	
terial requirements for con-	
struction.....	14703
residence for Capitol and Supreme	
Court pages—	
hearing.....	546
report.....	14087
staff report.....	10436
residential alterations and repairs,	
construction reports.....	4346, 17084
sales, construction reports.....	3356
Tangier, Morocco, construction of	
official residence for Consulate	
General, GAO review.....	10614
temperature in wood parts of houses	
throughout U.S.....	6743
wood-frame 2-story and basement,	
atomic explosion effects.....	131
see also Housing.	
Housewares, see Household goods.	

	Entry
<b>Housing:</b>	
act of 1949—	
amend, hearing—	2231
urban renewal programs authorized by act, operations report—	3972
act of 1959, include handicapped families in loan program for elderly, hearing—	392
act of 1961, policies, etc., for Federal assistance, open-space land program guide—	20868
act of 1964—	
law—	17418
reports— 15549, 15723, 17542,	17602
section-by-section analysis—	14131, 17872
administrator, basic statutes, public regulations, and formal orders—	3275, 12534
aging nonwhites, how they live, analysis of 1960 census data—	4827
and community development legislation, hearings—	8370
and community development programs, chronology of major Federal actions, July 1892 through 1963—	15972
Appalachian region, quality of rural and urban housing—	10454
Boston, civil rights report—	1838
career opportunities—	19808
census, amend U.S. Code rel. to duties of enumerators—	
law—	17389
report—	17792
census, 1960—	
evaluation and research program of U.S.— 185, 10067, 15322—	323
background, procedures, and forms—	185
final reports—	1806
1/1,000 and 1/10,000 samples— description and technical documentation—	21037
two national samples of population of United States, description and technical documentation—	11916
procedural report—	1827
processing data, Puerto Rico—	1808
senior citizens, special text—	194
States and small areas, outlying areas, Puerto Rico, Guam, Virgin Islands—	1806
census, publications, price list—	13389
civilians employees of Federal agencies, rental, etc., regulations, clarify authority—	
hearing—	12151
law—	17318
reports—	4549, 12078
code of Federal regulations—	8568
Communist China, translations—	7031
consumer buying intentions—	183, 8132, 11907, 17108
conventional loans, secondary market facilities, establish, hearings—	526
current reports—	
housing characteristics—	17086-87
housing vacancies—	159, 6038, 10047, 17085
dealers and individuals subject to certain sections of title 1, National housing act, list—	4692
drafts of bills, message from the President—	6200
economic situation and housing construction outlook, 1965 (remarks)—	19354
equal opportunity, case studies, series—	21367
family housing and Negro serviceman—	10099

	Entry
<b>Housing—Continued</b>	
family, Navy design manual, changes—	3204
farm labor, assistance, hearing—	2231
farm labor, loans—	15218
Federal laws, amend—	
hearings—	12254
questions and answers on provisions of S.2468—	14129
FHA housing for the elderly, projects and people—	15893
Florida, homes in Florida—	657
for elderly people—	
direct loan program, hearings—	2232
National Capital Housing Authority recommendations, report—	7894
problems, hearings— 8434, 12246,	14123
rural areas, insured loan program, extend—	
law—	13889
reports—	12091, 14058
senior citizens loan program, information—	8191
Government-owned, Brookhaven National Laboratory, AEC, inadequate rental rates, GAO, report—	10605
Guam, public authority to undertake, law—	251
home owners' loan act, amend, hearings—	6346
housing and planning references—	3580
investigation, expenses, report—	12072
legislation of 1964—	
hearings—	12254
questions and answers on provisions of S.2468—	14129
living units, minimum property standards—	8548, 17979
low-income demonstration program—	2438
project directory—	19809
low-rent projects—	
high costs of sites in San Francisco regional area, Public Housing Administration, GAO report—	4761
suggested training program for management aide—	15851
military family housing program, appropriation, 1965—	
hearings—	15795
law—	17434
reports— 12059, 12061, 15772,	17604
multifamily, minimum property standards—	4698, 17978, 19686
national housing act—	
amend—	
hearings—	2233, 8452
law—	13897
reports—	4465, 10281
utilizing FHA sec. 221(d)(3) below market interest rate—	16903
new private units authorized, 1962—	158, 15307
nonprofit, for older people, financing (paper)—	230
nonwhite population, changes between 1950 and 1960—	832
Panama, investment guaranty program, staff survey team report—	10313
paraplegic, program, expand—	
hearing—	4573
law—	17260
report—	15695
people act through community participation and by working together, exhibit depicts advances—	1646
planned-unit development with homes associations—	6636, 19685

# INDEX 1964

	Entry		Entry
Housing—Continued		Housing and Home Finance Agency—Con-	
Prisons Bureau employees, inade-		tinued	
quate rents charged, GAO re-		weekly news summary of releases	
port	10606	issued	3579
project mortgage insurance, FHA		what it is, what it does	2437
regulations	17977	Housing insurance, <i>see</i> Mortgage in-	
amendments	4696,	surance.	
6634-35, 10521, 14244-245,		Houston, J. M., pyrometer correction	
15892, 17976.		due to dimer absorption in Cs	
public—		vapor	5876
community service programs	21861	Houston, Sam, 5-cent commemorative	
labor and material requirements		postage stamp (poster)	1539
in construction	13072,	Houston, Tex.:	
low-rent, local authorities partici-	20436	occupational wage survey	18639
pating in PHA programs	3689	principal electric facilities, map	678
projects, services for elderly (ad-		Hovey Group of northeastern Maine	19779
dress)	11718	How safe are health workers? confer-	
public and private, investigation		ence workshop (remarks)	13031,
authorization reports	4541, 4554		13034, 14672
rural areas, loans for rental units		How to plan a shooting field	20927
for senior citizens	20932	How to tailor a woman's suit	19074
sales, construction reports, an-		Howard, C. L., methods for improving	
nouncement and order form	13747	critical heat flux for BWR's	10029
savings and home financing—		Howard, Floyd G., heat transfer on	
chart book	12389	unswept and 38° swept fins	18739
source book	17973	Howard, Gene S., shelterbelt tree and	
senior citizens, statistics	10072	shrub species under dryland	
specially adapted housing for blind		culture in central Great	
veterans, grants by VA—		Plains	4221
hearing	4573	Howard, James C., orbital element	
law	17260	control with potential applica-	
report	15695	tions to manned space mis-	
starts, construction reports	3357	sions	11391
announcement and order form	13747	Howard, Kayo F., relief	6381
statistics, monthly	3581	Howard, Mildred S.:	
surplus commodity, electricity tax,		housing for the elderly, report of	
agreement with France	16876	recommendations made to Na-	
United States AID missions, bibli-		tional Capital Housing Author-	
ography	18156	ity	7894
units classified by 1959 income of		planning bathrooms for today's	
occupants, current housing re-		homes	20921
ports	17087	Howe, Bob, construction machinery	
urban planning assistance program,		and equipment, 1962	15297
project directory	3183, 9865	Howe, John T.:	
urban renewal directory	4125	chemical relaxation behind shock	
vacant units in United States	6038,	waves in carbon dioxide	7520
	10047, 17085	mass addition in stagnation re-	
veterans—		gion	18795
direct loans, VA to fix prices of		solutions of ionized radiating shock	
loans for resale, hearing	4573	layer	1485
home-buying guide	7832	transport of chemically reacting	
<i>see also</i> Barracks and quarters—		species in classical capillary	3025
Houses.		Howes, M. H., mineral industry of	
Housing and Home Finance Agency:		Utah	1425
administrator—		Howes, Walton L., effect of initial ve-	
basic statutes, public regulations,		locity on 1-dimensional, ambi-	
and formal orders	3275, 12534	polar, space-charge currents	16720
make study of Federal assistance		HQM series	4602
to flood disaster victims, re-		Hrasky, William C., radiance of earth	
port	461	and its limb in middle ultra-	
appropriations, 1965—		violet	14885
hearings	10290	Hsieh, A. C. L., effects of immersion of	
supplemental proposal	15420	hand in cold water on digital	
community improvement program		blood flow	20955
for Cincinnati, Ohio, weak-		Hsu, C. C.:	
nesses in administration, GAO		unbalanced jets in ground prox-	
review	10626	imity	3173
HHFA program guide	8191	viscous effects on balanced jets in	
inadequate policies and practices re-		ground proximity	1636
lating to relocation of families		Huang, Su-Shu, series solution for	
from urban renewal areas,		some periodic orbits in re-	
GAO report	19756	stricted three-body problem ac-	
ineffective administration in reha-		cording to perturbation meth-	
bilitating Hyde Park-Kenwood		od	20611
urban renewal area, Chicago,		Hubbard, Charles R., mineral re-	
Ill., GAO report	19757	sources of upper Missouri Riv-	
loans or grants for urban mass		er basin, Mont.	18669
transportation systems in met-		Hubbard, Harvey, ground measure-	
ropolitan areas, authorize—		ments of sonic-boom pressures	
law	13913	for altitude range of 10,000 to	
report	12057	75,000 feet	14903
news releases	3892	Hubbard, James P., relief	15469
planned public works, additional		Hubbell, David W., apparatus and	
funds, hearing	4573	techniques for measuring bed-	
supervisor and equal employment		load	19797
opportunity policy	8791		

# JANUARY-DECEMBER

	Entry
Hubbell, J. H., shielding against gamma rays, etc., from nuclear weapons	7577
Huber, Paul W., hypersonic shock-heated flow parameters, etc.	14900
Huddleston, Edith M., comprehensive report on enrollment in higher education	19626
Hudson, C. Michael, fatigue-crack propagation of titanium and stainless-steel alloys, etc.	20587
Hudson Bay, surface water records of basin, Oct. 1950-Sept. 1960	18144
Hudson County Laborers' Pension Fund, <i>see</i> Laborers' Pension Fund of Hudson County, N.J.	
Huff, William R., pilot-scale fluidized-coal feeder utilizing zone fluidization	16638
Huffer, Elizabeth R. L. G., relief	2019, 6161, 6406
Hughes, Ralph H., germination of gallberry seed	18073
Hughes, Thomas L., address, June 8, 1964	17031
Hughes Aircraft Co., microminiaturized instrumentation system, evaluation	1728
Hugler, Edward T., testimony, hearings	8456
Hulsing, Harry, Pacific slope basins in Oregon and Lower Columbia River basin	4818
Human anatomy, <i>see</i> Anatomy.	
Human and Resource Conservation Council, National, <i>see</i> National Human and Resource Conservation Council.	
Human body, <i>see</i> Anatomy.	
Human engineering:	
adaptive dynamic response characteristics of human operator in simple manual control	11395
bibliography related to human factors system program	18729
design of simulators for operator training	7648
evaluation, air traffic control and communication mobile system, AN/TSQ-47	5890
human factors design standards for fleet ballistic missile weapon system	5618-19
man's role in a system, acceptance data in descriptive model utilization	20524
organization of work in engineering psychology in USA, translations	7224
<i>see also</i> Man-machine system.	
Human factors aspects of lightplane safety	13737
Human free-fall trajectories	13617
Human race, <i>see</i> Man.	
Human relations, international meetings, world list	4168
Human resources, <i>see</i> Ability.	
Human rights, <i>see</i> Civil rights	
Human tracking performance under transverse accelerations	7469
Human transfer functions, measurements with various model forms	16705
Humane atom, radioisotopes at service of medicine	11871
Humboldt, County, Nev.:	
geology and mineral deposits	8768
Gatchell mine, geochemical exploration	15943
Humboldt River and Valley, hydrogeologic investigations	15963

	Entry
Humidity:	
air, influence on development of convective motions in cloudless atmosphere, USSR study	975
measuring set AN/TMQ-11(A), modification and testing	7961
variable, bioclimatic cabinet for simulating, design and operation	19051
Humizol, biologically active drug, effect upon phagocytic defense reaction of organism, etc., USSR study	16183
Humpherys, Allan S., hydraulic and geometrical relationships of lay-flat irrigation tubing	19103
Humphrey, Judith M., index-catalogue of medical and veterinary zoology	19057
Humphrey amendment to foreign assistance act of 1961, <i>see</i> Co-operatives.	
Hundley, R. O., ultraviolet spectroscopy of upper atmosphere	14769
Hung-ch'i (periodical):	
translations	1131, 2545, 4974, 5217, 5389, 8925, 8957, 10912, 11163, 12646, 12885, 14436, 14481, 16188, 16302, 18290, 18301, 18314, 18451, 19844, 19991, 20138, 20199, 21383, 21630.
Hungarian language, Foreign Service Institute, basic course	13464
Hungarian Microbiological Society:	
Bacteriology and Virology Section, scientific meeting, invitation	16243
4th international congress, program and speakers	21595
Hungary:	
Academy of Sciences—	
activities	20266
awards	16109
awards to outstanding scientists	7032
Biological Sciences Department, leadership report	7257
chemical and biological research, translations	18456
Chemistry Division, reports	21458
international activity, 1963	18437
leadership of Mathematics and Physics Dept., annual reports	8915, 12586
Medical Department leadership report	21610
miscellaneous information	10744
new academicians	12779
presidium, annual report, 1961-63	21405
qualification and degrees, directive of president	16054
bibliography of social science periodicals and monograph series, 1947-62	6047
Communist in workers' paradise, consultation with John Santo, print additional copies, report	17568
construction industry, 1961-63, translation	21625
degrees awarded, Oct. 1963, list	8849
doctors and candidates, lists	12913, 16223
economy, basic data	10702
forging industry, current status and future, translations	7203
General Assembly of Forensic Medicine Section of Pathologists, Anatomists of Medical and Public Health Workers Union	20380



# INDEX 1964

Entry	Entry
Hungary—Continued	Hunt, W. W., jr.—Continued
geodetic work.....	time-of-flight mass spectrometer
Hungarian Microbiological Society,	adapted for studying charge
Bacteriology and Virology Sec-	transfer, ion dissociation, and
tion, scientific meeting, invita-	photoionization.....
tion.....	66
index-digest of decisions, 1949-52.....	Hunter, Henry J.: C-130 aircraft ramp unloading kit.....
lectures on current problems in cell	35-ft. ring-slot parachute extraction
regulation.....	system development.....
20087	16987
legal journals, abstracts.....	Hunter, J. Scott, beginning teacher
941, 2685, 4893, 5261, 5494, 7181,	1 year later.....
9151, 10831, 11159, 12937, 16091,	14177
16270, 18497, 19940, 20164.	Hunting: California hunters, forest fire pre-
Light Industry Ministry, regula-	vention knowledge.....
tions, etc., translations.....	8690
1199	migratory bird regulations, 1964-
16222	65.....
Mothyronin, new drug.....	15925, 19734
Ministry of Metallurgy and Machine	Hunting for facts (Government pub-
Industry, organization and op-	lications).....
erational code.....	1548
16538	Hunting Island Beach, S.C.: beach erosion control study, engi-
18518	neer report—
20067	departmental edition.....
National Patent Office applications.....	17944
14515	document edition.....
provincial press, summaries.....	17457
950, 973, 1206, 2480, 2567, 2686, 2881,	Huntington, N.Y.: hydrogeology of area.....
4941, 5143, 5161, 6887, 6960,	10655
7176, 7260, 8935, 9024, 9055,	population, special census of town.....
9158, 9203, 9226, 10730, 10829,	170
10957, 11040, 11177, 12641,	Hurley Construction Co., relief.....
12809, 12872, 12896, 12959,	441, 1889
14500, 14633, 16050, 16068,	Huron Indians: ethnography, 1615-49—
16260, 16405, 16445, 16452,	departmental edition.....
18282, 18381, 18472, 18536,	document edition.....
19883, 19894, 20018, 20157,	11814
20346, 20352, 21608.	12019
radioactive isotopes, preparation in	Hurricanes: Hurricane Dora, 1964, emergency
1st experimental nuclear re-	actions, information, etc., civil
actor.....	defense report.....
2753	21047
regulations governing salaries of	surveys, engineer reports—
scientific personnel.....	Atlantic City, N.J.—
12762	departmental edition.....
relationship between medical sci-	document edition.....
ence and social public health	10483
activities.....	10188
21588	Chesapeake Bay—
report on visits of Hungarian sci-	departmental editions.....
entists to bloc countries.....	2294, 6595
20163	document editions.....
Research Institute of Organic	1991, 6203
Chemical Industry activities.....	Delaware River and Bay, Pa.,
14514	N.J., and Del.—
scientific personalities.....	departmental edition.....
1178	17942
scientific qualification and training	document edition.....
of aspirants.....	17467
5102	Fort Lauderdale, Fla.—
8848	departmental edition.....
scientists, classifying system.....	6589
	document edition.....
	6205
	Garden Creek, Va.—
	departmental edition.....
	6590
	document edition.....
	6204
	Strafford, Conn.—
	departmental edition.....
	8519
	document edition.....
	8261
	Virginia, middle and lower penin-
	sulas—
	departmental edition.....
	8517
	document edition.....
	8259
	Washington, D.C., metropolitan
	area—
	departmental edition.....
	15877
	document edition.....
	15408
	Hurrie, Donald R., relief.....
	17499
	Husack, Ralph, effect of gamma radi-
	ation on anthracite.....
	9508
	Husbandry, see Animals.
	Husbands and wives: budgeting for young couple, guide.....
	16953
	civil service retirement benefits,
	amend act relative to annuities
	for surviving spouses without
	deduction from original annu-
	ities, hearings.....
	19520
	Huss, Ralph E., United States Govern-
	ment documents having general
	legal effect.....
	9629
	Hust, J. G., thermodynamic property
	values for gaseous and liquid
	carbon monoxide.....
	3050
	Hutchinson, Joseph C., language lab-
	oratory, how effective is it?.....
	14189
	Hutchinson, S. Blair, address, April
	1964.....
	12435

	Entry		Entry
Hutchinson, V. Vern, selected list of Bureau of Mines publications on petroleum and natural gas, 1910-62	21692	Hydraulics—Continued	
Hybovodstvo i rybolovstvo (periodical): translations	18421	properties of earth materials (series)	819
Hybridization: animals and hybrids, comparison of radiosensitivity, USSR study	12760	prototype analysis, Waterways Experiment Station capabilities—research in United States, 1964	633
sorghum hybrids, selection, USSR study	12834	river hydraulics (series)	16738
Hyde, Rosel H.: addresses, etc.—Nov. 4, 1963	2310	theory and application of rating curves for section controls	21357
July 7, 1964	15888	transitions for small canals, design	18150
Hydrates: alumina, and dilute fluoride solutions, used in preparation of aluminum fluoride	20500	USSR use of electronic computers	11593
calcium aluminates encountered in lime-soda sinter process	5482	Hydrazine: hydrocarbon vapor mixtures, limits of flammability	10885
hydrates and hydrating agents, new properties	8800	X-irradiation	16646
Koppers hydrate process for saline water conversion, experimental and engineering studies	10674	Hydroacoustical station Paltus, USSR	18778
Hydraulic engineering: apparatus and techniques for measuring bedload	19797	Hydrobiology, see Marine biology.	12592, 15996
design of reservoir outlet structures, manual	616	Hydrocarbons: achievements in geological research, Rumanian study	21464
Rumanian Black Sea littoral problems, symposium	8859	analyzer, development for nuclear submarine atmospheres	18345
Hydraulic fracture treatments in Glade and Clarendon oil reservoirs, Warren County, Pa.	14753	chlorinated pesticides, identification and measurement in surface water	20758
Hydraulic mine filling, properties of hydraulic backfills and preliminary vibratory compaction tests	14759, 18680	hydrazine vapor mixtures, limits of flammability	16646
Hydraulic power amplifiers	81	hydrocarbon-type relationships of Eastern and Western Hemisphere high-sulfur crude oils	21712
Hydraulic spray applications of insecticides for control of slash pine cone and seed insects	18084	producing from oil, natural gas, oil shale, and tar sands deposits in U.S., potential of nuclear explosives	13110
Hydraulic systems: automation, pneumatic-hydraulic, 6th all-Union conference	7210	removal from automotive exhaust using promoted uranium catalyst	1441
pipelining for power transmission equipment, cleaning and protecting, military standard	10450	Hydrocooling vegetables, practical guide to predicting final temperatures and cooling times	1708
Hydraulics: and geologic factors, effects on streamflow of Yakima River basin	4807	Hydrocortisone: excretion with urine of 17-hydroxy-corticosteroids and 5-hydroxy-indoleacetic acid in pilots, USSR study	8881
cooling reservoirs, design, USSR study	18364	intramuscular ACTH test based on parotid fluid free 17-hydroxy-corticosteroid levels	17013
design of stilling basins and energy dissipators	9743	Hydrocyanic acid, residual, determination in commodities	763
discharge ratings for streams at submerged section controls	18150	Hydrodynamic wave tube	1738
flood-routing methods and unsteady flow in channels, bibliography and discussion	18140	Hydrodynamic waves, see Magneto-hydrodynamics.	
ground-water hydraulics (series)	2424	Hydrodynamics: equations forecasting atmospheric pressure fields, USSR study	4960
lay-flat irrigation tubing	19103	forecasting of pressure fields in mid-level of atmosphere for entire sphere of earth considering orography, USSR study	6884
model investigations—Amistad Dam, Rio Grande, Mexico and U.S., spillway	19662	naval, symposium	18851
Arkansas River, overflow embankments	14212	pulsed water jet, use for destruction of rocks, results	8993
central and southern Florida water-control project	642	Hydroelasticity, naval hydrodynamics symposium	18851
Kahului Harbor, breakwater repair	8520	Hydroelectric power, see Electricity.	
low-head, navigation dam, Arkansas River, Ark., spillway	21282	Hydroelectric power plants, see Electric power plants.	
Oahe Dam, Missouri River, S. Dak., spillway	19663	Hydrogasification of high-volatile A bituminous coal	7453
Waterways Experiment Station capabilities for resolution of problems	629	Hydrogen: atom, theory of 2s and 2p excitation induced by electron impact	13220
physiographic and hydraulic studies of rivers (series)	10642, 12510	catalytic reduction of carbon monoxide with hydrogen	14773
		chemically frozen expansion, rocket performance	3029
		composition, opacity, and thermodynamic properties at high temperatures tables	5502
		cooling cone by ejection from its apex at Mach 7	20604

# INDEX 1964

	Entry		Entry
Hydrogen—Continued		Hydrogeology—Continued	
cost estimates of processes for separating mixtures of methane and hydrogen	20506	northwestern Nassau and northeastern Queens Counties, N.Y., reconnaissance of Foró Point and vicinity, Luzon Island, Philippines	15955
cryopumping in vacuum chambers is aided by catalytic oxidation of hydrogen	14803	Truckee Meadows area, Washoe County, Nev., evaluation	18151
detonation waves formation in—hydrogen-oxygen mixture	9604	Hydrography, details shown on Polish topographical maps	12790
stoichiometric hydrogen-oxygen mixture, high-speed photographic investigation	11393	Hydrology:	
diffusion in carbon steels, effect of carbon content, USSR study	11003	Anchorage area, Alaska	15965
electromagnetic wave propagation in cold, collisionless atomic hydrogen plasma	11379	and biotic characteristics of grazed and ungrazed watersheds, Badger Wash Basin, Colo., 1953-58	4804
exhaustion in evolution of massive stars through onset of carbon burning	9613	aquifer systems, Memphis area, Tenn.	19801
film boiling heat-transfer coefficients obtained in forced flow, correlation study	13230	Babylon-Islel area, Suffolk County, Long Island, N.Y.	18147
frequency ranges for existence in cold, collisionless hydrogen plasma	11403	Beaver Creek basin, influences of strip mining	10643
fused fluoride coatings as solid lubricants	16686	Bulgaria, tasks	5266
heat transfer and friction data at surface temperatures up to 5600° R	11407	career professional positions, examination announcement	21060
laminar and turbulent heat transfer and friction over parallel plates at 5000° R	18763	conditions in Wheatland Flats area, Platte County, Wyo.	19804
liquid—		contributions to hydrology—	
integrated hot wire-stillwell liquid level sensor system	1474	Africa and Mediterranean region (series)	6823-24
S-IV all systems vehicle explosion	20567	Asia and Oceania (series)	815
neutral, in earth's environs and in interplanetary space	2699	Latin America and Antilles (series)	820
resistance-heated thrusters, research	11408	United States (series)	818
resonance, scattering at Lyman-alpha by atomic hydrogen cell	13221	821-25, 827-28, 2427-28, 2433-34, 4813-15, 4824, 6815, 6819-21, 6823-26, 8780, 8783, 10651, 10655-657, 10661, 12528-329, 14356-357, 15958, 15965-966, 15968-969, 18149-152, 19793, 19800-803, 21360-362	21355
spontaneous chain ignition with oxygen in shock waves, USSR study	14444	contributions to stream-basin hydrology (series)	2422
Stark profile measurements of Lyman- $\alpha$ and Lyman- $\beta$ lines	5608	flood hydrology (series)	12515
thermodynamic and transport properties for hydrogen-oxygen system	18727	frequency distributions, techniques for fitting to hydrologic data	9931
thermodynamic properties and Moller chart, 300° K to 20,000° K	11359	Furnace Creek Wash area, Death Valley National Monument, Calif., reconnaissance	21361
see also Parahydrogen.		Geological Survey research—	
Hydrogen-ion concentration:		1963, short papers	8772
field measurement of pH	4805	1964, short papers	14347
luminescent examination of fluorochromized cells at different pH values, USSR study	7074	geology and hydrology of Guam, Mariana Islands (series)	10640
Hydrogen sulfide, therapy in treating nervous illnesses, USSR study	20411	14340, 19784	
Hydrogenation:		glacial stream, White River, Mount Rainier, Wash.	4791
coal, unconventional methods	13108	ground-water, laboratory and field methods, bibliography	12529
New Mexico coal, at short residence and high temperature	14752	Honey Creek basin, Collin and Grayson Counties, Tex., watershed studies, 1953-59	15967
Hydrogeochemistry, Truckee Meadows area, Washoe County, Nev., evaluation	18151	hydrologic data for experimental agricultural watersheds, 1956-59	4213
Hydrogeology:		hydrologic effects of land use (series)	4804
Bulgaria, tasks	5266	hydrologic effects of urban growth (series)	18139
Grand Prairie region, Ark.	4809	hydrology of volcanic-rock terranes (series)	19783
Humboldt River Valley near Winnemucca, Nev.	15963	influences of strip mining (series)	4792
Huntington-Smithtown area, Suffolk County, N.Y.	10655	literature published in 1962, USSR	2749
layer sampling for water-bearing horizons, USSR study	1247	meteorology and hydrology (USSR periodical), translations	1302, 11207
Navajo Lake, Kane County, Utah	21355	mining hydrology (series)	2423, 6810
		multiphase fluids in porous media, review of theories	4789
		Navajo Lake, Kane County, Utah	21355

	Entry
Hydrology—Continued	
Poland, organization and activities of State Institute—	922
Polish research—	2737
progress, USSR studies—	18442
public domain (series)—	814
relationship of ice phase dates on some lakes and rivers in western USSR—	16553
San Bernardino area, Calif., features—	8774
snowmelt hydrology of Sierra Nevada stream—	6826
stream, related to optimum discharge for king salmon spawning in northern California Coast Ranges—	14357
stock-water development in southeastern Idaho—	814
surface water, coastal basins of northern California—	12526
tidal streams (series)—	19791
upper Black Earth Creek basin, Wis—	821
USSR—	
articles—	10822
organization, plans and meetings—	2746
studies—	7022
translations—	20301
West Milton area, Saratoga County, N.Y.—	12524
Hydrolysis, pyrohydrolysis, boron scrap recovery—	8062
Hydromagnetic waves, <i>see</i> Magneto-hydrodynamics.	
Hydrometallurgy, hydrometallurgical recovery of manganese from manganiferous slimes and limestone—	7440
Hydrometeorology:	
reorganization, USSR study—	11148
USSR selected articles—	12817
Hydrophobic and oleophobic fluoropolymer coatings of extremely low surface energy—	13341
Hydroplaning, pneumatic tire, phenomena—	1470
Hydroponics, nutrient mixtures, USSR study—	16524
Hydrostatic stability of liquid-vapor interface in gravitational field—	11399
Hydrostatic stability of liquid-vapor interface in low-acceleration field—	18771
Hydrotherapy, radon, USSR studies—	9300
Hydroxides, production, USSR study—	12869
Hygiene:	
beryllium and its relation to industrial hygiene—	21518
industrial—	
rhenum aerosol, hygienic characteristics, USSR study—	18372
toxicity problems in using organic phosphorus insecticides, USSR study—	6944
USSR chemical industry technological progress—	5045
labor—	
cement plants, USSR studies—	20220
chemical industry, USSR studies—	5359
problems in production of metallic thallium and its salts, USSR study—	14547
USSR studies—	21553
occupational hygiene in work with polonium, extracts from USSR booklet—	7275
problems in radioactive contamination of outer space, USSR study—	7060
publications, price list—	13390
radiation, biogeochemistry, problems, USSR study—	7000

	Entry
Hygiene—Continued	
radiation hygiene, USSR studies—	1053, 14455
Rumania, protection, prospects for development—	9334
underground uranium mining, aspects, USSR study—	7291
USSR studies—	19834
<i>see also</i> Health.	
Hygiene and sanitation (USSR periodical):	
translations—	18385
Hygienists, <i>see</i> Dental hygienists.	
Hygrometers, NBS standard instrument—	11433
Hyland, Frances, basic data on economy of Pakistan—	4851
Hyland, James B., ground water in Cedar Rapids division of lower Platte River basin, Nebr.—	19800
Hyperbolas, geometry and 1st-order statistics for 3- and 4-station hyperbolic fixes on spherical earth—	19166
Hyperoxia, short-duration, endocrine and metabolic effects—	8001
Hypersonic flow, <i>see</i> Flow.	
Hypertension, <i>see</i> Blood pressure.	
Hyperthermia, cerebral arteriovenous differences in metabolic substrates—	17015
Hypertonic urea, <i>see</i> Urea.	
Hypertrophy, compensatory, organs of mammalian animals and man—	8999
Hypochlorites, color removal from surface waters—	20956
Hypodermic needles, used to construct miniature oxygen-hydrogen cutting torch—	11376
Hypothermia:	
blood variations in Alaskan ground squirrels—	19142
effects on vascular responses—	9977
reversible process, cybernetic control, USSR study—	11124
surface immersion, studies—	8044
tolerance to prolonged deep hypothermia, studies—	9978
USSR studies—	16328
Hypoxia:	
and alcohol effects on heterophorias—	7997
white rats, effect of adrenalectomy on resistance to radial acceleration, USSR study—	16279
<i>see also</i> Oxygen deficiency.	

## I

I & N reporter—	3582
I.C.C., <i>see</i> Interstate Commerce Commission.	
I.C.R.U., <i>see</i> International Commission on Radiological Units and Measurement.	
I.D.A., <i>see</i> International Development Association.	
I.L.G.W.U., <i>see</i> International Ladies' Garment Workers Union.	
I.L.O., <i>see</i> International Labor Organization.	
I.R.G.R., <i>see</i> International Research Group on Refuse Disposal.	
I.R.S., <i>see</i> Internal Revenue Service.	
I. V. Grenbenshchikov Institute of Silicate Chemistry, Academy of Sciences, USSR, scientific personnel, bibliography of work—	12994
IADB, <i>see</i> Inter-American Development Bank.	
IAGLO, <i>see</i> International Association of Governmental Labor Officials.	



# INDEX 1964

	Entry		Entry
IAIABC, <i>see</i> International Association of Industrial Accident Boards and Commissions.		Ice Harbor Dam:	
Iannucelli, Battistina G., relief.	8274	fish passage report, 1962	613
Iannuzzi, Gerald P., occupational wage survey, Trenton, N.J.	9460	fish passage report, 1963	17936
Ibach, D. B., commercial fertilizer used on crops and pasture in United States, 1959 estimates.	16971	icebreakers, <i>see</i> ice breakers.	
Iberall, A. S., general dynamics of physical-chemical systems in mammals	21738	Iceland:	
Ibirite quadrangle, Brazil, geology	10638	agricultural commodities, agreements	9827-9828
IBRD, <i>see</i> International Bank for Reconstruction and Development.		education, exchange program, financing, agreement	11631
ICAO, <i>see</i> International Civil Aviation Organization.		educational data	12322
ICC, <i>see</i> International Commission for Supervision and Control of Laos—Interstate Commerce Commission.		foreign trade regulations	21081
Ice:		lights and fog signals, list	21816
bibliography with abstracts	8511, 19652	sailing directions, change	20669
Canada, lake and river locations, prediction curves	17937	trade agreement	1607
flow rates and shifts in rivers, USSR studies	18288	trade, interim agreement, revising Schedule I	18962
formation of lake ice in temperate climate	8507	ICEM, <i>see</i> Intergovernmental Committee for European Migration.	
formations on various airfoils, prediction of aerodynamic penalties	7534	ICFTU, <i>see</i> International Confederation of Free Trade Unions (ICFTU).	
ice sheets—		Ichiban, dosimetry program for nuclear bomb survivors of Hiroshima and Nagasaki, status report as of Apr. 1, 1964	15279
fringed by mountain ranges, profile and heat balance at bottom surface	19649	Ichthyology, <i>see</i> Fish and fisheries.	
nonequilibrium, rate of growth or shrinkage	19651	ICRU, <i>see</i> International Commission on Radiological Units and Measurements.	
load encountered by ship propeller blades, determination, USSR study	18336	IDA, <i>see</i> International Development Association.	
manufactured, sanitary standard relating to manufacture, processing, etc., PHS recommendations, 1964	13418	Idaho:	
mechanics of circular plates on elastic, sealed foundations	8509	annual survey of manufactures, 1962, standard metropolitan areas and large industrial counties	6032
melting, heat exchange, USSR study	9293	climatic summary, 1951-60, decennial census	19019
model, laminar heat transfer over melting plate, modified Leveque problem	10485	climatological data	3329
on earth's surface	21278	electric rate book	21305
possibility of existence on moon	20625	labor organizations, reporting, register	16574
properties	12345	mineral industry, minerals yearbook chapter	21699
reflection and transmission coefficients at interface ice-solid	14202	municipal waste facilities, 1962 inventory	3108
relationship of ice phase dates on some lakes and rivers in western USSR	16553	municipal water facilities	18913
sea and salt, structural control of vertical variation of strength	14203	national forests, recreation	12437
sea, growth, structure, and strength	21277	Phosphoria formation, statistical analysis of sample and assay data from bedded deposits	9518
shear zones in ice cap margin, Thule, Greenland	12343	precipitation data, hourly	3578
solidification and separation from saline water	10677	snow survey and soil moisture measurements	18960
visual resolution and optical scintillation over	12344	southeastern—	
Ice age, <i>see</i> Glacial period.		Georgetown Canyon-Snowdrift Mountain area, geology	12504
Ice Age National Scientific Reserve; designation and administration—		hydrology of stock-water development	814
law	21147	southern, floods, Feb. 1962	18118
reports	375, 19455, 19583	titanium placer deposits	1438
Ice breakers, strength of screw propeller blades, USSR study	18239	water supply outlook and snow surveys	4139
Ice cream, ices, etc.:		weather stations, decadal census	15157
containers, amend D.C. act regarding size:		western, upper Jurassic mollusks	15952
law	17264	Idaho batholith:	
report	14106	metamorphic and igneous rocks along northwest border zone (series)	805, 4784-85
		near Pierce and Bungalow, Clearwater County, Idaho	4785
		reconnaissance petrographic cross-section in Adams and Valley Counties, Idaho	8760
		Ideal Cement Co., factory, dedication (remarks)	1856
		Ideal gas:	
		decay of strong plane shocks	20528
		tables for oblique-shock flow parameters in air at Mach number from 1.05 to 12.0	9592
		Ideals are like stars, address	20426
		Ideas, 4-H and youth development (newsletter)	6630

	Entry		Entry
Identical bidding in public procurement, 2d report of Attorney General under Executive Order 10936	20422	Illinois—Continued	
Identification:		Great Lakes area, fishery products, wholesale dealers, list	726, 8610
aircraft and related products	8531	labor organizations, reporting, register	16572-573
deceased personnel, technical manual	8042	mineral industry, minerals year-book chapter	1410
Flue-cured tobacco varieties under price support program	9929	Mississippi River and tributaries, fishery products, wholesale dealers, list	8613
tree species on large-scale panchromatic and color aerial photographs	15207	municipal waste facilities, 1962 inventory	3105
Identification cards, issuance to spouses of Members of Congress, report	6316	municipal water facilities	18910
Ideology:		national forests, amount of money available to State, hearings	6336
Soviet documentary film content	8880	precipitation data, hourly	3578
United States ideological effort through Government agencies and programs, study	12132	women, labor laws, summary	19033
United States ideological offensive in winning cold war—		women workers	1665
hearings	2112, 4497, 8382		
report	10228	Illiteracy:	
report on hearings	6354	functional literacy and basic work skills training for unemployed—	
United States ideological operations and foreign policy, report	10228	explanation of bill	7354
Ifaluk Atoll, free-living Copepoda	14961	hearings	397
IFR, see Instrument flight rules		law	1943
Ignall, H. R., evaluation of frozen pork loins and chops	5715	reports	2048, 4527
Igneous rocks:		Illness, see Sick	
Chichagof and Krusof Islands, Alaska, recognition criteria on aerial photographs	6795	Illustrations, technical illustrating, for contractor reports for NASA	16666
fossils in Ordovician tuffs, north-eastern Maine	14338	Illustrators:	
northwest border zone of Idaho batholith (series)	805, 4784-85	medical, VA positions, examination announcement	15360
Igniting system for mercury vapor lamps protects transistorized sustaining supply	16669	scientific, medical, examination, announcement	15356
Ignition:		Ilmenite:	
and spark-ignition systems, bibliography	1494	electric smelting of titaniferous iron ores from Alaska, Montana, and Wyoming	18681
coal dust-methane-air mixtures by hot-turbulent-gas jets	7447	sands, Lakehurst Mine, Glidden Co., exploration methods, etc.	2981
dust dispersions, preventing by inerting	21713	ILO, see International Labor Organization	
spontaneous chain ignition of hydrogen with oxygen in shock waves, USSR study	14444	Im, Lim Myung, see Zehr, Michelle S.	
spontaneous reignition of previously extinguished solid propellants	9580	Image (psychology):	
IGY, see International Geophysical Year, 1957-58.		cybernetic approach to problem, USSR study	16439
Ikels, Kenneth G.:		nature, mental reflection in light of ideas of cybernetics, USSR study	7146
determination of solubility of nitrogen in water, etc.	7999	Image intensifiers:	
solubility of neon in water and extracted human fat	13650	internal trainer optical system, development	7647
Ilex glabra, see Holly		solid state	7647
ILGWU, see International Ladies' Garment Workers Union		imitation, trace, comparison with conditioned trace reflexes in chimpanzee, USSR study	16170
Iliff, Robert L., laser-satellite reflection parameters	16996	Imlay, Ralph W.:	
Illegitimacy:		marine Jurassic pelecypods from central and southern Utah	18137
and dependency	21366	middle Bajocian ammonites from Cook Inlet region, Alaska	18129
facts and observations	19315	upper Jurassic mollusks from eastern Oregon and western Idaho	15952
Ill, Walter, axial-load fatigue properties of PH 15-7 Mo stainless steel, etc.	14887	Imle, Ernest P., relief	12178, 13852
Illinois:		Immer, John R., small plant layout	20790
annual survey of manufactures, 1962, standard metropolitan statistical areas, and large industrial counties, statistics	6027	Immersion, weightlessness simulation with subject immersed in rotating water tank, observations	20585
climatic summary, 1951-60, decennial census	19020	Immigration and emigration:	
climatological data	3329	France, immigrant labor problem, Communist Party proposals	11151
electric rate book	14247	immigration and nationality act, amend—	
forest area, by counties, 1962	18051	hearings	17659, 19517, 21209
		print additional copies, report	19478
		immigration and nationality act—	
		Inquiry into entries of aliens relative to individual hardship cases (recognized international emergencies, and Russian Old Believers, under administrative discretionary parole authority	6366
		judicial decisions	2115
		text, including amendments	15595

# INDEX 1964

	Entry
Immigration and emigration—Continued	
immigration to United States, 1953-62	2115
investigation—	
authorization, reports	4557, 6483
expenses, report	17811
laws—	
administrative decisions—	
indexes	8794, 21368
notice	8792
general information	18159
problems, study	2115, 6366
print additional copies, report	19479
publications, price list	18888
Immigration and Naturalization Service:	
I & N reporter	3582
immigration patrol inspector, examination announcement	208
interim decisions	3601
Immigration Border Patrol, <i>see</i> Border Patrol, Immigration and Naturalization Service.	
Immunity, genetics, control mechanisms for antibody formation, theories	9006
Immunization, and resistance to toxins, USSR	20240
Immunobiology, USSR studies	14638
Immunology, infectious disease studies, USSR	2627
Impact:	
alleviation, landing characteristics of reentry vehicle with passive landing system	5512
biomedical research studies, bibliography	13732
copper filaments into aluminum targets	7496
droplet, theoretical aspects of measurements	13
flash at low ambient pressures	7548
high impact strength aluminum castings for low temperatures	13151
human survivability in free-fall	1791
hypervelocity, damage characteristics in armored space radiator tubes	20599
seismic model impactor	1737
Impedance:	
input, curves of change due to ground for dipole antennas	5546
thoracic cage measurements—	
cancellation of respiration effects on trans thoracic impedance	5906
cardiac output	9988, 15238
dynamic characteristics of pneumograph	5907
impedance product systems	76
tissue resistivity	9987
Impedance bridges, <i>see</i> Electric bridges.	
Imperial Council of Ancient Arabic Order of Nobles of Mystic Shrine, <i>see</i> Ancient Arabic Order of Nobles of Mystic Shrine.	
Imperial Shrine Convention, Inc., 1965, permits, authorize, report	14107
Imperialism, U.S. imperialists to be defeated in South Vietnam	5188
Imports:	
airborne, foreign trade reports	3529-30, 4110
beef cattle, hearing	8355
detentions, food, drug, and cosmetic products, report	3968
exchange permit rules summarized for world traders	11970
foreign trade reports	3526-27, 13768
notice to users of FT 125, changes in presentation of statistics	11910
summary reports, monthly	4117-21

	Entry
Imports—Continued	
import-export overtime law, clarify, report	15514
Netherlands, what can you sell—	21075
statistical classification—	
schedule A, changes	157
schedule T	4354
schedule Y	4355, 10046
total trade, summary reports, monthly	4121
trade—	
by commodity, summary reports, monthly	4117
by country, summary reports, monthly	4118
by customs district, summary reports, monthly	4119
United States commodities as related to output, 1962 and 1961—	8141
announcement and order form—	10071
United States merchandise for consumption, TSUS schedules by part by item, 1961	1823
United States, working day and seasonal adjustment factors and months for cyclical dominance, 1948-63	10075
<i>see also</i> Tariff— <i>also</i> names of countries, etc.— <i>also</i> names or classes of articles imported.	
Improved insertion-loss tester	14824
Improvement of St. Elizabeths Hospital Commission, establish, hearings	6350
Imuruk Lake, geology of area	2416
In vitro effectiveness of topical applications of low concentration stannous fluoride solutions	13647
In vivo measurement of total gas pressure in mammalian tissue	1789
Inactivation and reactivation of facilities	11730
Inauguration of the President, <i>see</i> President of the United States.	
Incentive awards, <i>see</i> Rewards (prizes, etc.).	
Incentive contracting guide	6544
Incineration, engineering manual, changes	621, 4668
Income:	
aged people, State variations, 1959	3133
consumer expenditures and income—	
Anchorage, Alaska	2951
Athol, Mass.	11269
Bakersfield, Calif.	9381
Baton Rouge, La.	7372
Cambridge, Ohio	11272
Crookston, Minn.	11272
Denver, Colo.	1368-69
Durham, N.C.	2956, 5427
Eureka, Calif.	11271
Fairbanks, Alaska	1366
Florence, Ala.	11270
Gainesville, Tex.	11270
Green Bay, Wis.	2957, 5428
Honolulu, Hawaii	1370-71
Ketchikan, Alaska	1367, 5426
Lancaster, Pa.	2952-53
Las Vegas, Nev.	9379-80
Logansport, Ind.	11272
Mangum, Okla.	11270
Manhattan, Kans.	11272
Martinsville, Va.	11270
Menasha, Wis.	11272
Millville, N.J.	11269
Okmulgee, Okla.	11270
Orem, Utah	11271
rural nonfarm areas—	
northeastern region	18626
southern region	18627
United States	16586
western region	14687

# JANUARY-DECEMBER

	Entry
Income—Continued	
Consumer expenditures and income—Continued	
Sebring, Fla.-----	11270
Southbridge, Mass.-----	11269
urban places—	
North Central region-----	13044
northeastern region-----	13043, 18621
southern region-----	13045
western region-----	14686, 18622
urban United States-----	11268, 18623-625
Wichita, Kans.-----	2954-55
consumer income—	
families and persons at record high in 1963-----	11906
families and persons in United States, 1963-----	19305
consumer income, series-----	11906, 19305
cooperative extension service work with low income families-----	2314
the aging-----	2316
migrants-----	2315
distribution—	
actual problems in system-----	16190
development, Hungarian study-----	21626
family—	
income and related characteristics among low-income counties and States-----	21926
metropolitan areas, 1960-----	6034
sources and structure, 1960-----	10074
United States, medical care and health status-----	11584
farm, situation-----	3456
how our income is divided, graphic pamphlet-----	187
income and expenses, combined financial statements, members of Federal Home Loan Bank System-----	655
income-loss protection against short-term sickness, 1948-62-----	5690
low, housing demonstration program, project directory-----	2438, 19809
low-income families, 1960-----	6033
median family income and related data, by counties, including rural farm income-----	5861
neighborhoods-----	2966-68
older people, 1962, supp-----	3191
older persons, 1959, selected data-----	7854
railroads, selected items-----	4024
retirement and measures of need-----	7740
rural family spending and consumption, low-income area in Kentucky-----	19081
senior citizens, statistics-----	10072
size by family characteristics, 1960-----	8106
tax returns statistics—	
business, 1961-62-----	2449, 12548
corporations, 1961-62-----	857
fiduciary, gift and estate tax, 1960-----	6840
individual, 1961-----	4843
individual, 1962-----	18167
unemployed, work history and attitudes-----	7418
working with low-income rural families-----	14237
see also subject from which income is derived.	
Income tax:	
abolish, fallacies and dangers of proposed Liberty amendment-----	4519
print as Senate document, report-----	4537
business, unrelated taxable income, amend Internal revenue code—	
law-----	15397
reports-----	8344, 14068

	Entry
Income tax—Continued	
collapsible corporations, amend tax laws—	
law-----	17343
reports-----	8335, 15701
corporations outside D.C. making loans secured by D.C. property, clarify status, report-----	15567
deductibility of accrued vacation pay, extend time—	
law-----	17412
reports-----	13946, 15700, 17616
deductions—	
depletion allowance, appointment between parties, to certain contracts for extraction of minerals, report-----	13948
organizations contributions to which are deductible, list, supplement-----	3388
depreciation guidelines and rules for tax purposes, revenue procedure 62-21, 1964-----	21371
double taxation, agreement with Mexico, earnings from operation of ships and aircraft-----	20834
double taxation, convention with Japan, protocol, ratification, report-----	15615
Luxembourg, ratification, report-----	15615
Netherlands, extension to Netherlands Antilles, protocol, ratification, report-----	6377, 15615
Sweden-----	6378, 21887
supplementary, ratification, report-----	15615
United Kingdom, application to Southern Rhodesia, etc-----	7788
employer's tax guide-----	6837
exempt status for nonprofit nurses' professional registries, report-----	13962
Federal income tax reductions and small business-----	20783
installment method of reporting income for tax purposes, modify—	
law-----	17398
report-----	15702
installment obligations transmitted at death, release of liability under bonds—	
law-----	17428
reports-----	10206, 15784, 17614
interstate commerce employees, exempt nonresidents from State withholding tax—	
hearing-----	10413
report-----	12225
IRS loose-leaf regulations system-----	851-852, 2446, 3694, 4835, 6839, 8803-4, 10684-685, 12542-543, 14367, 15975-976
life insurance companies, amend act, hearing-----	15806
missing persons, amend act—	
hearing-----	17866
law-----	17287
report-----	15742
nonprofit corporations, mutual deposit guarantee funds, hearing-----	15805
Panamanian, withholding, agreement with Panama-----	1616
President's tax proposals, press releases-----	4513
reduction and revision—	
hearings-----	529
law-----	6183
print additional copies, report-----	6318

Do not order from index; see indicated entry

Page 345



# INDEX 1964

	Entry		Entry
Income tax—Continued		Index digests, Foreign Claims Settlement Commission, decisions, 1949-62	19745
reduction and revision—continued		Index numbers, <i>see</i> subjects, e.g. Prices.	
message from the President, 1963, summary	4514	Indexes:	
program (remarks)	3178	agriculture bibliography, serial publications indexed in	14930
provisions of significance to farmers	8470	AMC publications, military	17034
report	6441	American Ethnology Bureau, bulletins 1-100—	
print additional copies, report	6272	departmental edition	4272
staff description of H.R. 8363, as passed by House of Representatives	12262	document edition	4427
summary of provisions of H.R. 8363	12162	Atomic Energy Commission, engineering materials list	8072
as agreed to by conferees	12260	Children's Bureau publications, 1912-May 1964	15320
as reported by Senate Finance Committee	12261	Civil Aeromedical Research Institute, reports	4312
tax bill in perspective (remarks)	1643	Civil Defense Office publications	6069, 15343
timing of tax cut (remarks)	5732	code of Federal regulations, 1964—	12397
reduction, question of expenditure control (remarks)	3177	Commerce Department publications, 1963 supplement	17164
returns statistics—		Commercial Fisheries Bureau, Branch of Technology publications, 1955-59	14277
business, 1961-62	2449, 12548	congressional record, daily	3351
corporations, 1961-62	857, 18166	contract number index to reports announced in STAR and TPA, cumulative	9541
individual, 1961	4843	contributions to North American ethnology, introductions, etc.—	
individual, 1962	18167	departmental edition	4272
State and territorial, withholding on compensation of Federal employees, regulations governing	3176, 11689, 15140, 21912	document edition	4427
State taxation of interstate commerce, report	13928	Defense Department specifications and standards	19614
print additional copies, report	17822	supplement	3586
taxable income and taxes withheld from pay of military personnel, erroneous reporting, GAO report	2401	digest of public bills and resolutions	8421
teaching taxes program—		effects of radiation on mammalian eye, literature survey	21015
farm	2450	electron tubes, cross index and type identification, military standardization handbook	4604
general	2451-52	Federal item identification guides for supply cataloging—	
travel, entertainment and gift expenses, rules for deducting	2448	alphabetic index of names	8463
treatment of small business investment companies, etc., report	19579	numeric index of descriptive patterns and item name codes	8464
turning point in tax policy (remarks)	7825	Federal register	3489
your federal income tax for individuals, 1964	2453	Federal specifications and standards	6693
correction notice	6841	Federal specifications, standards, and handbooks, supplements	3585
Incompatibility, physiologic, new break in barrier of tissue transplants, USSR study	21412	Federal supply classification—	
Inconel:		alphabetic index, supplements	3495
brazo coatings, etc., effect on 1200° F stress-rupture strength	1454	numeric index—	
spectral normal and total normal emittance, effects of preoxidation treatments	16684	addendum	3493
Inconel X, spectral normal and total normal emittance, effects of preoxidation treatments	16684	supplements	3494
Indecent publications, <i>see</i> Obscene matter.		flood damage prevention, bibliography	1632
Indemnity:		fundamentals of electronics	20692
research contractors, indemnification by VA—		gasification patents, Belgian, French, German, Italian, and Swedish	18660
law	17292	hearings on revenue act of 1963	529
report	15753	History and Technology Museum papers	1509
Independence National Historical Park:		Immigration and Naturalization Service, administrative decisions	8794, 21368
acquire Graff House site—		Index medicus	3583
hearing	14144	journals indexed, list—	
law	17336	Jan. 1963	7595
reports	4453, 15736	Jan. 1964	7596
general information	5565	Industrial production, 1961-63—	17985
property exchange—		Interstate Commerce Commission, reports involving finance, consolidated index digest	8830
law	19412	keywords, to technical reports, semimonthly	3632
reports	10260, 17845		
Independent offices, <i>see</i> Government offices.			

Indexes—Continued	Entry
Maritime Administration, Maritime Subsidy Board, National Shipping Authority, current regulations	13096
medical translations, 1959-62	18917
military periodicals, Air University Library	8238
Missouri Basin Inter-Agency Committee, minutes of 1st-131st meetings, July 19, 1945-June 18, 1963	7463
Le Monde	802, 1116, 2622, 5084, 6980, 8046, 10756, 11200, 12988, 16177, 18222, 19954, 21384
National Aeronautics and Space Administration, appropriations, 1965, hearings	10345
National Guard Bureau publications	14943
Naval Training Device Center publications	20700
Navy officer classifications manual	11481
Navy procurement information	11526
notice to mariners	1524, 11480, 21819
NSSP surface network	11697
nuclear science abstracts	3806
conferences abstracted in	4300, 13709
cumulative report number, with public availability citations	8095
Oak Ridge National Laboratory master analytical manual	13712
officers or employees, financial or business interests, investigation, hearings, witnesses and exhibits	15823
output per man-hour in private economy, methods etc. for developing	11296
Patent Office index to classification	1536
patents, 1963	9693
plastics, technical conference papers	564, 19619
President's papers	13095
Harrison, Benjamin	1392
McKinley, William	18652
Washington, George	1392
President's papers series	13095, 18652
psychiatric index for interdisciplinary research, guide to literature, 1950-61	19011
renegotiation rulings and bulletins	11595
research grants of NIH, 1963	11451-452
research results, Office of Aerospace Research	11801, 15230-231, 20969
Russian accessions	3738
scientific and technical aerospace reports	4010
subject guide	13138
snow, ice, and permafrost bibliography, with abstracts	15806
Social Security Administration, research reports and research and statistics notes	7733
La Stampa and La Stampa sera	888, 1017, 1069, 1195, 1290, 1306, 2518, 2577, 2616, 2834, 4942, 4906, 5074, 5100, 5153, 5325, 5394, 6955, 7054, 7148, 7280, 8945, 9019, 9157, 9274, 9348, 10848, 10925, 11012, 11107, 11202, 12630, 12785, 12870, 12992, 14442, 14548, 16020, 16086, 16157, 16229, 16347, 16432, 16549, 18292, 18407, 18520, 18584, 19906, 20054, 20147, 20206, 20388, 21472, 21504
trademarks	7671
translations, NIH library, 1954-63	16745
tree planters notes	12483

Indexes—Continued	Entry
United States defense policies from World War II through 1963	21169
weather stations	16782
wildlife abstracts, 1956-60	10581
Yards and Docks Bureau publications	3205, 5777, 19042
Indexing and abstracting experimentation support (final report)	4257
India:	
accessions list, Library of Congress	
American Libraries Book Procurement Center, New Delhi	3590
agricultural commodities, agreements	5708, 13473
agricultural trade, trends	6558
agriculture	8471
artesian water in Malabar coastal plain, southern Kerala	12518
atomic energy, cooperation for civil uses, agreement	1617
aviation, military aircraft flights, agreement	1613
educational data	579
hunger and poverty, struggle against, observations	2730
labor conditions	5445
miniature paintings from collection of Mildred and W. G. Archer, catalog	3055
trade in cotton textiles, agreement	13470
west coast, sailing directions	7633
Indian Affairs Bureau:	
Branch of Education, orienting new employees	835
employees, relief	323, 6431, 8214
field and central offices, directory	3425
press releases	3898
publications price list	14362
Indian Bend, Wash.:	
Gila River basin, Ariz., flood control, engineer report	
departmental edition	10489
document edition	10191
Indian Claims Commission:	
appropriations, 1965	
hearings	6338, 8436
law	13904
reports	8288, 8420, 13951
cases before, revolving fund to finance assistance, law	248
Indian lands:	
California, rancherías and reservations, distribute, amend act	
law	17278
reports	8332, 15721
flooding, prevent before provision made for relocation of Indians, report	15502
Interior Department decisions	3602
population and land, U.S., 1962	838
see also names of Indian tribes or reservations	
Indian Ocean:	
explorations of ocean survey ship 31/USC&GSS Pioneer	6110
international oceanological expedition	16407
lights and fog signals, list	9674, 16779, 21813
northeastern part, principal features of structure of bottom of basin, USSR study	10806
notice to mariners	3800
oceanology, USSR studies	10933
radio navigational aids, 1964, changes	7636, 14994, 20676
radio weather aids	3075, 18313, 21818
research, USSR	7167
south, sailing directions, change	5576
three new species of frogfishes	18823
tide tables, 1965	13812
Indian Ocean Expedition, see International Indian Ocean Expedition	

# INDEX 1964

Entry	Entry
Indian reservations, water supply of Indian reservations (series)-----	2426, 12514
<i>see also</i> names of reservations.	
Indian schools, boarding and day, housekeeping suggestions for employees-----	833
Indiana:	
annual survey of manufactures, 1962, standard metropolitan statistical areas, and large in- dustrial counties, statistics-----	6027
climatic summary, 1951-60, decen- nial census-----	19021
climatological data-----	3329
electric rate book-----	15895
Great Lakes area, fishery products, wholesale dealers, list-----	727
labor organizations, reporting, reg- ister-----	16572
mineral industry, minerals year- book chapter-----	1411
Mississippi River and tributaries, fishery products, wholesale dealers, list-----	15927
municipal waste facilities, 1962 in- ventory-----	3105
municipal water facilities-----	18910
150th anniversary of admission as State, commemorative medals, amend act-----	
law-----	264
report-----	457
precipitation data, hourly-----	3578
State conference on industrial mo- bilization (remarks)-----	19275
women, labor laws, summary-----	11724
Indiana Dunes National Lakeshore: establishment, authorize-----	
hearings-----	12269
report-----	17711
Indianapolis, Ind.:	
occupational wage survey-----	9463
principal electric facilities, map-----	674
Indians:	
adult vocational training and em- ployment, amend act-----	
law-----	1959
report-----	335
Alaska, tale of two totems-----	2444
American, war against poverty (ad- dress)-----	10670
California, review of affairs, hear- ing-----	403
code of Federal regulations-----	8569
constitutional rights, hearings-----	6515
dental services, fiscal year 1964, annual report-----	21844
education, statistics, 1963-----	836
Federal facilities, report, Oct. 28- Nov. 14, 1962-----	2228
fishing rights, hearings-----	19602
handcraft series-----	2439
Indian education (periodical)-----	12538
Indian health highlights-----	15054
Indian leader (periodical)-----	3591
Indian school journal (periodi- cal)-----	3592
industrial development program-----	14361
nursing careers among American Indians-----	3112
population and land, U.S. 1962-----	838
protect from flooding of lands be- fore provision made for reloca- tion, report-----	15502
publications, price list-----	14362
revolving fund, assistance in cases before Indian Claims Commis- sion, law-----	248
sanitation facilities, PHS authority under P.L. 86-121-----	15064
scholarships available, general in- formation-----	2440
Indians—Continued	
timber, amend act relative to sale— law-----	10144
reports-----	498, 8319
unemployed American-----	837
young hunter of Picuris, story-----	839
<i>see also</i> names of reservations or tribes.	
Indicators, <i>see</i> Gas indicators—Vi- bration indicators.	
Indictments:	
defective, reindictment after dis- missal, amend U.S. Code-----	
law-----	17379
report-----	17743
Indispensable weapon-----	59
Indium, foil with beryllia washer im- proves transistor heat dissipa- tion-----	11368
Individuality, individualism in chang- ing world (address)-----	20923A
Indonesia:	
agricultural commodities, agree- ment-----	20831
Communist party— performance praised by Italian Communists-----	4906
2d plenum, Central Committee— resolutions-----	8956
speeches-----	8913
crisis in Southeast Asia-----	5936
economy, basic data-----	8815
foreign trade regulations-----	12552
investment factors-----	18176
Peace Corps program, agreement-----	9813
press surveys-----	983
1180, 2470, 2761, 4937, 5130, 5377, 7085, 7261, 8995, 9233, 10870, 11067, 12594, 12866, 14499, 14658.	
discontinuance, publication no- tice-----	12579
scientific cooperation with USSR-----	6987
Indopane, effect on bioelectrical ac- tivity of cerebrum, USSR study-----	2587
Induction (military service), <i>see</i> Mil- itary service.	
Induction heating, <i>see</i> Heating.	
Inductors, toroidal, with de bias, de- signing-----	14861
Indus Basin development fund, agree- ment, supplemental-----	13477
Indus Plain, report on land and water development-----	21837
Industrial accidents, <i>see</i> Accidents.	
Industrial arbitration:	
and N.L.R.B., happy marriage? (speech)-----	13290
Labor Board, hospitable reception for arbitration (address)-----	14960
recent developments affecting arbi- tration and NLRB (speech)-----	11455
State mediation laws, summary-----	11261
Industrial arts:	
courses, grades 7-12, preliminary report-----	17916
why industrial arts in school cur- riculum?-----	4652
Industrial classification, <i>see</i> Industry.	
Industrial College of Armed Forces: catalog, 1963-64-----	2467
catalog of publications, 1962-63-----	12575
correspondence course offered on economics of national security-----	12574
monograph publication R series-----	12575
National Security Seminars— information guide for conduct of-----	12576
presentation outlines and reading lists-----	881-882, 15995
prospectus, 1964-65-----	12577
Industrial designers, employment out- look-----	13053

	Entry
Industrial Development Mission to the Philippines, to promote machinery exports.....	14391
Industrial diamonds, <i>see</i> Diamonds.	
Industrial diseases, <i>see</i> Occupational diseases.	
Industrial education:	
State supervisors, directory.....	4617
teacher trainers, etc., directory.....	4618
trade and industrial curriculum materials, list.....	8479
USSR, aspects.....	7150
Industrial homework, <i>see</i> Home labor.	
Industrial hygiene, <i>see</i> Hygiene.	
Industrial hygienist, examination announcement, amendment.....	6081
Industrial machinery, <i>see</i> Machinery.	
Industrial management:	
Communist China, translations.....	19856
financial, listing of materials from marketing information guide.....	4335
improved plant management, all-Union, review.....	16310
intra-industry management program helps business help itself.....	3125
mechanization and automation, USSR studies.....	12029
Poland, current central plan, tentative optimization.....	9112
USSR proposals.....	6902
Industrial plants, <i>see</i> Plants (industrial).	
Industrial production, <i>see</i> Production.	
Industrial property, <i>see</i> Public property.	
Industrial relations:	
Army Dept., supervisor relationships with employee organizations.....	5041
automation (remarks).....	7357
BLS studies, 1954-63, directory.....	11286
concepts and principles, Navy applications.....	20693
labor-management disputes, role of National Labor Relations Board (address).....	9648
labor management-government relations matter (address).....	1357
labor management relations examiner, examination announcement.....	17144
labor management relations (Taft-Hartley Act).....	
amend, hearings.....	4494
amend, report.....	12094
national emergency disputes, 1947-62.....	2949
labor-management reporting and disclosure act.....	
bonding provisions of Federal labor laws.....	4492
hearings.....	15498
report.....	
electing union officers, requirements.....	18611
employer and consultant reporting.....	16377
text.....	14668
Post Office Department and AFL-CIO, agreement.....	15025
publications, list.....	3787
remedies available to NLRB, evaluation (address).....	13293
role and significance of expertise in administration of national labor relations act (address).....	11456
State legislation.....	
mediation laws, summary.....	11261
union regulatory provisions, summary.....	16583
Industrial safety, <i>see</i> Safety of life.	
Industrial security, <i>see</i> National security.	

	Entry
Industrial security manual for safeguarding classified information.....	10446
Industrial Tractor Parts Co., Inc., relief.....	17202, 17672
Industrial waste, <i>see</i> Waste products.	
Industrial workers, <i>see</i> Labor.	
Industries, <i>see</i> Industry—also names of industries.	
Industry:	
American, and international atomic power program (remarks).....	135
BDSA industry growth studies.....	6000
big city, characteristics.....	13661
business firms, decision-making on research and development.....	9664
classification system, purpose and principles (address).....	11912
Communist China, translations.....	910,
1102, 1213, 1339, 2603, 2611,	
2723, 2787, 2929, 4933, 4958,	
4988, 5077, 5235, 5265, 6918,	
6933, 7031, 7104, 7154, 7281,	
8936, 8970, 10796, 12642, 12830,	
14412, 14537, 14643, 16293,	
16421, 16482, 18398, 18475,	
18600, 19857, 19998, 20176,	
20313, 21469.	
current industrial reports.....	160-168,
189, 1809-19, 3390-01, 3706,	
4347-48, 6039-46, 8110-21,	
10048-61, 11892-904, 13750-761,	
15308-313, 17088-103, 19290-297, 21028-34.	
data from 1960 census by State, health manpower source book.....	5653
East European, materials industries, translations.....	5195, 21454
economics, BDSA publications list.....	11878
Estonian, tasks and plans.....	9349
funds for research and development, 1961, final report on survey.....	13306
heavy.....	
cost of production, USSR.....	16356
East European, translations.....	917,
1106, 1315, 2532, 2725, 2899,	
5187, 5219, 5316, 6961, 7009,	
7203, 7331, 8963, 9262, 9353,	
10823, 11071, 11121, 12631,	
12698, 12829, 12843, 12941,	
14485, 14502, 16130, 16261,	
16363, 16377, 16460, 16538,	
18255, 18395, 18558, 19841,	
20045, 20323, 20350, 20381,	
21457, 21562, 21574.	
Hungarian Ministry of Light Industry, regulations, etc., translations.....	1199
Indian industrial development program.....	14361
Indiana State conference on industrial mobilization (remarks).....	19275
industrial modernization (remarks).....	10132
industrial outlook for 1964.....	10044
industrial radio services, FCC rules and regulations.....	8534
industry and government, partners in progress (addresses).....	7924, 8093
industry outlook series.....	15299
industry reports.....	3317,
3365, 3371, 3952	
industry survey.....	3593
injury rates, 1958-60.....	14691
joint industry promotional funds, employer contributions.....	4494
hearings.....	12094
report.....	
light, USSR, development on basis of chemistry.....	20190
manual, and product classification, 1963 censuses.....	6036



# INDEX 1964

	Entry
<b>Industry—Continued</b>	
mobilization, BDSA publications, list	11878
modernization—	
key to new markets (addresses)	8181, 11880
Long Island Conference proceedings, Apr. 16, 1964	13742
Portland Area Conference proceedings, Mar. 26, 1964	13743
Southwestern Conference proceedings, Jan. 17, 1964	13744
Tri-State Regional Conference, proceedings, Jan. 9, 1964	11881
Washington State Conference proceedings, Mar. 31, 1964	13745
mortality by occupation and industry, title page and contents, v. 53, nos. 1-5	3116
output, cost and price, USSR study	21503
output per man-hour indexes	2969, 5441
pamphlets	1652, 7838
Polish—	
development plan, optimization	7303
interbranch balance for 1961 in physical terms, study	9153
price formation, in relation to cost, USSR study	16182
protection against chemical agents and radiation, USSR studies	2522
safety of life, environmental and chemical hazards series	5419, 18614
scientific and technical personnel—	
1961	9665
1962	16613
seasonal nature, fair labor standards act, regulations	7840
site survey, how to make	1755
technological trends in 36 major industries, study	11299
Tennessee, opportunities for modernization program (address)	19274
tourist and redevelopment areas, statement	15257
training programs, nationwide survey, 1962	11817
unemployment insurance tax rates by industry, 1962	8498
USSR—	
financial services, use at enterprises	6966
industrial instruction methods	10905
instrumentation problems	2765
need for improved standards	18438
USSR development, translations—	
automotive industry	1161, 2404, 2601, 2706, 2928, 5056, 5134, 6995, 7226, 7295, 9083, 9275, 10949, 12601, 14493, 16029, 16160, 16168, 16510, 18219, 18357, 18450, 19853, 19932, 20023, 20039, 20215, 20281, 20292
chemical industry	900, 1040, 1076, 1143, 1188, 1325, 2572, 2667, 2738, 2823, 2826, 2883, 4985, 4993, 5024, 5058, 5075, 5094, 5119, 5203, 5214, 5220, 6895, 6900, 6927, 7076, 7088, 7116, 8884, 8912, 8926, 8942, 9053, 9075, 9189, 9261, 9303, 10768, 10952, 11027, 11111, 12729, 14631, 16019, 16104, 16115, 16169, 16262, 16337, 16400, 16427, 16468, 16546, 18276, 18355, 18379, 18452, 19887, 20041, 20129, 20144, 20162, 20194, 20200, 21462, 21628

	Entry
<b>Industry—Continued</b>	
USSR development, translations—	
Continued	
chemical machine building	1068, 1204, 2646, 2865, 2911, 4947, 5329, 7155, 9013, 10752, 11242, 16111, 18210, 19889, 21433
construction machinery	1146, 1277, 1311, 2544, 2721, 2917, 5048, 5053, 5071, 7180, 7314, 8958, 9333, 10732, 12784, 16101, 16339, 16426, 18546, 20293
electric power and electrotechnical industries	5000
electrical equipment	1109, 2521, 2715, 2760, 5062, 5109, 5118, 5302, 5401, 6933, 7105, 7047, 7256, 14652, 16121, 16428, 16512, 16530, 18577, 20184, 21607
ferrous metallurgy	897, 1072, 1127, 1169, 1316, 1349, 2504, 2835, 2923, 5009, 5050, 5067, 5111, 5197, 5221, 5299, 5314, 5331, 5384, 5413, 7133, 8891, 8947, 9134, 9149, 10783, 10751, 10896, 10954, 10990, 11093, 11138, 11211, 12660, 12676, 12839, 12865, 14491, 16002, 16087, 16194, 16225, 16284, 16306, 16324, 16359, 16434, 16556, 18206, 18260, 18408, 18531, 18565, 19971, 20097, 20267, 20307, 20378, 21427, 21525, 21637
machinery industries	997, 1022, 1236, 2511, 2541, 2871, 2922, 5086, 5125, 6906, 6924, 7108, 8923, 9148, 9213, 11068, 12603, 12615, 13002, 16017, 16041, 16289, 16310, 16367, 16509, 18211, 18509, 18538, 20288, 20377, 21426, 21460, 21623
metalworking equipment	1075, 1134, 1235, 1259, 2472, 2484, 2599, 2705, 2846, 2851, 2854, 4951, 5038, 5090, 5133, 5137, 5159, 5268, 9164, 9174, 10770, 11113, 11166, 12776, 12903, 13001, 14520, 14545, 16134, 16148, 16360, 16433, 16485, 16506, 18258, 18268, 18417, 18585, 19840, 20007, 20231, 20341, 20393, 21506, 21591
nonferrous metallurgy	2582, 2656, 4891, 4990, 5223, 5248, 6959, 7097, 9054, 9176, 9236, 10728, 10748, 10772, 11112, 11203, 14507, 16112, 16236, 16291, 16340, 16545, 18218, 18329, 18410, 18532, 18578, 19903, 20287
power machinery	1085, 2583, 5089, 7091, 18555, 21437
precision equipment	2503, 2694, 2740, 5164, 5183, 6962, 7077, 10726, 18350, 18491
regional economy	965, 999, 1027, 1157, 1208, 1258, 2474, 2486, 2629, 2677, 2776, 2815, 2829, 4896, 4950, 5085, 5099, 5147, 5160, 5174, 5239, 6958, 7078, 8898, 8919, 9120, 9146, 9285, 9304, 9349, 10938, 11120, 12707, 12770, 14432, 14458, 14570, 16135, 16161, 16273, 16353, 16415, 16465, 18308, 18511, 20012, 20186, 20256, 20284, 20327, 20414, 21425, 21524, 21622

# JANUARY-DECEMBER

	Entry		Entry
Industry—Continued		Inflation (finance):	
USSR development, translations—		administered prices, hearings.....	537
Continued		Latin America.....	2570
tractors and agricultural machin-		public policy on administered prices,	
ery	926,	hearings.....	537
938, 1194, 1273, 1317, 2574,		Inflight loss of consciousness, case	
2635, 2801, 2822, 2836, 2878,		report.....	4318
4916, 4953, 5014, 5036, 5052,		Influenza:	
5180, 5222, 6967, 7273, 7313,		in irradiated animals, effect of bone	
8927, 8937, 8998, 9047, 9175,		marrow cell injections, USSR	
9268, 10915, 11053, 12009, 12704,		study.....	9330
12777, 12825, 16021, 16385,		virus, cold relationship to biological	
16401, 16511, 18287, 18409,		properties, etc.....	4252
18432, 19904, 20022, 20042,		Information, <i>see</i> Public information.	
20260, 20279, 20282, 20306,		information and travel tips, do's and	
20379, 21436, 21501, 21643,		don'ts.....	15095
21651.		Information assimilation from alpha-	
wage surveys—		numeric displays, amount and	
communications.....	5438	density of information pre-	
cotton textiles.....	20437	sented.....	13685
eating and drinking places.....	16606	Information bulletins, <i>see</i> names of	
hospitals.....	16611	departments, etc., issuing bul-	
hotels and motels.....	18640	letins.	
iron and steel foundries.....	2065	Information centers, <i>see</i> Information	
laundries and cleaning services.....	16607	services.	
machinery manufacturing.....	9468	Information Office, Agriculture Dept.:	
synthetic textiles.....	20438	appropriations, 1965, hearings.....	10286
women's and misses' dresses.....	9469	congressional list (series).....	4830
western Michigan, opportunities for		Information services:	
modernization program (ad-		Armed Forces internal information	
dress).....	19276	program (address).....	20984
<i>see also</i> Manufactures and manufac-		employment opportunities in bina-	
turers—also names of indus-		tional centers abroad.....	20864
tries.		informational media guarantees,	
Industry manpower surveys.....	4658	agreement.....	9837
Industry outlook series.....	6002-25	Information specialists, Armed Forces	
Inertia, Moments of, <i>see</i> Moments of		internal information program	
inertia.		(address).....	20984
Infants:		Information storage and retrieval sys-	
baby sitters, guide, when teenagers		tems:	
take care of children.....	17118	automated approach, library appli-	
childhood mortality trends, 1961..	21045	cations.....	15078
inborn heart defects.....	20753	capacity, USSR study.....	10935
infantile epilepsy explained to par-		complex information, organization	
ents.....	21542	and control, USSR study.....	18316
mortality—		digital system (AI-2048), excerpts	
lags in reducing.....	13536	from USSR book.....	5244
perinatal, means of reducing,		foreign developments, transla-	
USSR study.....	21587	tions.....	949,
Zhukovskiy, RSFSR.....	21552	1018, 1059, 1139, 2578, 2716,	
phenylketonuria, detection in new-		2783, 2852, 2915, 6921, 6981,	
born infant as routine hospital		7118, 8914, 9093, 9125, 11056,	
procedure.....	15332	11127, 16090, 16147, 16527,	
use of ionite milk in acute gastroin-		18512, 20169.	
testinal diseases, nitrogen bal-		Indexing and abstracting experi-	
ance.....	5027	mentation support, final re-	
<i>see also</i> Pregnancy.		port.....	4257
Infection:		magneto-acoustic, research.....	13142
experimental, Alaskan ground squi-		materials program, electrical and	
rel, influence of hibernation.....	19144	electronic properties.....	4224
institutionally acquired infections,		organization, application of com-	
proceedings of national confer-		puters in coding and machine	
ence, Sept. 4-6, 1963.....	20768	translation, USSR study.....	1018
streptococcal, bibliography.....	1564	perception theory, USSR study.....	1059
Infectious diseases, <i>see</i> Contagion and		processing operations, mechaniza-	
contagious diseases.		tion and automation, USSR	
Infiltration, <i>see</i> Water.		study.....	6964
Infiltrometer, hand portable rainfall-		scientific information system, inte-	
simulator, development.....	8761	grated agency-wide, feasibility	
Inflammable liquids, <i>see</i> Liquids.		of establishing in FDA.....	18038
Inflammable materials:		speech intelligibility computation,	
flammable liquids and gases, phys-		USSR study.....	1139
ical properties, maritime safety		title listing of CAA publications.....	17970
data.....	18615	water quality control data.....	15069
limits of flammability of hydrazine-		Information theory:	
hydrocarbon vapor mixtures.....	16646	and perception, USSR studies.....	20368
lip, face and hair preparations,		in psychology, information process-	
flammability in presence of		ing under task stress.....	5891
100% oxygen.....	13729	information and memory, USSR	
Inflation, Echo I system.....	13224	study.....	9295
		Lenin's theory of reflection, relative	
		to concept of information,	
		USSR study.....	18315

# INDEX 1964

Entry	Entry
Informational media guarantees, agreement between U.S. and Pakistan-----	9837
Inframicrobiology, <i>see</i> Microbiology.	
Infrared equipment for missile homing, USSR-----	12904
Infrared lamps, brooding chicks-----	9945
Infrared rays:	
advanced solid state detection-----	5867
coefficients and differences in parameter $\gamma$ = (kpc)- $\frac{1}{2}$ for seas and continents on moon's surface, USSR study-----	20050
maser materials, bibliography-----	7956
sea infrared radiation, interpretation in terms of its boundary-----	2139
Ingrova, Cilka E., relief-----	2139
Infrared spectrometers, <i>see</i> Spectrometers.	
Infrared spectroscopy, <i>see</i> Spectroscopy.	
Infrared spectrum, <i>see</i> Spectra.	
Infrasonic waves from auroral zone-----	13216
Ingots, <i>see</i> Metals—also names of metals.	
Ingrova, Cilka E., relief-----	2139
Inheritance and succession:	
acceptance of bequests by Secretary of Commerce for Department, authorize-----	19419
law-----	10403, 17628
reports-----	10403, 17628
Inheritance and transfer tax:	
estate tax, agreement with Greece, protocol-----	10360
report-----	14030
IRS looseleaf regulations system-----	853-
854, 3695, 10686, 12544,-----	15977
returns, 1960 statistics of income-----	6840
Inheritance of morphologic characters in Avena-----	16974
Injuries:	
accidental, statistics-----	15040
acute conditions, incidence and associated disability U.S., July 1962-June 1963-----	13423
aircraft crash, C-131E, report-----	13494
cell substances, changes after injury and excitation, USSR data-----	1148
coal mines, monthly report-----	3332
coal mining, analysis of safety factors, etc-----	2983, 20477
compensation guide for USDA supervisors-----	1538
Federal employees, work injury facts, 1937-62-----	8497
frequency rates in manufacturing industries-----	18641
gunshot injuries of the extremities, mechanism, USSR study-----	20024
impairments due to, July 1959-June 1961-----	5666
international statistical classification, revision considerations-----	9727
logging operations, causes-----	1373
metal and nonmetal industries, minerals yearbook chapter-----	20471
minerals industries, minerals yearbook chapter-----	21688
nonmetal industries, except stone and coal, 1960-----	1402
number of persons injured, U.S., current estimates-----	9733
July 1962-June 1963-----	21859
July 1963-June 1964-----	18663
oil and gas industry, 1963-----	18663
radiation-----	
effects on metabolism, USSR study-----	20029
restorative processes, USSR studies-----	21408
treatment, USSR study-----	5193
rates by industry, 1958-60-----	14691
rates in manufacturing industries-----	3597
Injuries—Continued	
surgical intervention, USSR studies-----	1167
traumatology, gerontology and geriatric problems, USSR study-----	20002
types, incidence and associated disability, July 1957-June 1961-----	11583
work injuries and work-injury rates, highway and street construction industry-----	2960
X-ray, USSR study-----	10805
<i>see also</i> Accidents.	
Ink:	
blue-black, Japanese studies-----	2825
numbering machine, Federal standard-----	6691
Inkberry, <i>see</i> Holly.	
Inland waterways:	
waterborne commerce-----	
1962-----	626
1963-----	17958, 19661, 21281
Inland Waterways Corporation:-----	
audit 1963, GAO report-----	4755
audit report, 1963-----	10167
Inman, Robert M.:-----	
heat transfer for laminar slip flow of rarefied gas-----	16719, 21770
laminar slip flow heat transfer in parallel-plate channel, etc-----	16704
Inner tubes:-----	
Federal item identification guides for supply cataloging-----	12289
supplements-----	3470
Innovation and experiment in education-----	9701
Inorganic compounds:	
current industrial reports-----	3390, 10053
salts, for high-temperature lubricants-----	9989
Insect pests, <i>see</i> Insects.	
Insect repellents:	
chemoreception of insects and ticks, USSR study-----	9199
flour beetles, laboratory evaluation of compounds, supplement-----	5832
Insect traps, light traps, effect on hornworm populations-----	11
Insecticides:	
candidate fumigants, effectiveness to stored-product insects-----	11769
cost of cotton insect control with insecticides at Tallulah, La-----	13565
development and study, USSR conference, report-----	21507
Federal Insecticide, Fungicide, and Rodenticide Act, amend-----	
law-----	12000
report-----	4480
hydraulic spray applications, control of slash pine cone and seed insects-----	18084
injurious effect on fish and wildlife, prevent or minimize, report-----	10216
insecticide formulation, instructive communication-----	15035
materials evaluated, Brownsville, Tex-----	9932
notices of judgment-----	13572
organic phosphorus, toxicology and industrial hygiene during their use, USSR study-----	6944
organophosphate, chronic exposure, effects on central nervous system-----	5999
organophosphorus, toxicity, Rumanian study-----	10849
recommendations for control of insects attacking crops, livestock, and households, 1964-----	7910
correction-----	15205
safe use and storage on farm-----	9942
<i>see also</i> Pesticides—also names of insecticides.	

# JANUARY-DECEMBER

	Entry		Entry
Insects:		Inspectors, air carrier operations,	
affecting slash and longleaf pines		handbook	19668
seed production, their identification and biological annotation	8691	see also types of inspectors.	
affecting sugarbeets grown for seed	1695	Instability lines and their environments as shown by aircraft soundings and quasi-horizontal traverses	11694
basic semiconductor circuitry for ecological and behavioral studies	15195	Installations (military):	
behavior, influence of larval nutrition on adults, USSR study	2662	Air Force, commercial communication services, manual	5886
biological controls, hearing	4485	Army	
blood-sucking, leucocytes of vertebrates in intestines, survival, USSR study	9007	continental U.S. list	104
chemoreception, USSR study	9199	facilities, basic criteria and construction standards, engineering and design manual	618
control		change	19655
cantaloup	13585	National Guard program operating procedures	9642
crops, livestock and households, insecticide recommendations, 1964	7910	building maintenance, roofing manual	7869
correction	15205	commercial life insurance solicitation, Army regulations	15263
house plants	20920	construction and family housing, appropriations, 1965	
household and stored-food, public health importance, training guide	1560	hearings	15795
insect control series, training guide	1560	law	17434
lawn	7919	reports	12059, 12061, 15772, 17604
on flowers	19063	construction appropriations, 1964	517
sterility method	20897	law	1949
stored rice	15206	reports	342, 512, 2066
cooperative economic insect report	3368	construction appropriations, 1965	
cotton, cost of control with insecticides at Tallulah, La	13565	hearings	12091, 12118
forest		construction authorization, 1964	254
conditions in United States		law	
1963	12432	construction authorization, 1965	6345, 12252
two plot transfer devices developed for aerial photographic trend surveys	14328	law	17249
grand fir cones, damage	8643	reports	6334, 8289, 14053, 15487
irradiated, pathogenic effect of doses of gamma rays on progeny	2475	construction surveying, Army technical manual	8038
potato insects, their biology and biological and cultural control	11752	continental U.S. transportation services, Army technical manual	19222
predicting insect-caused damage to Douglas-fir seed from samples of young cones	18072	disposal of waste water, report	15527
publications, price list	20736	enlisted evaluation system MOS evaluation test aid for construction machine operator	20991
quarantine notices under Plant quarantine act, P.P.C. series	3828	family housing	
slash pine cone and seed, hydraulic spray applications of insecticides for control	18084	and Negro serviceman	10099
species in herb stratum of sericea lespedeza stand, AEC Savannah River project	1781	program, appropriation, 1965	
stored-product effectiveness of candidate fumigants	11769	hearings	15795
value losses in southern hardwood lumber from degrade	18085	law	17434
see also Aquatic insects—also names of insects.		reports	12059, 12061, 15772, 17604
Insertion loss, improved tester	14824	ground structures, maintenance, Navy manual	11731
Inspection (Industrial):		military personnel and civilian employees, labor cost, control, hearings	17661
grain inspection points under grain standards act, list	7887	naval building maintenance, furniture and furnishings	15180
motor carriers, vehicles, road-check results	14407	naval shore facilities	
see also names of articles, etc., inspected.		building maintenance	
Inspection (military):		galley equipment	7868
sampling procedures and tables, military standard	12304	structures	5772
see also Military supplies—also names of substances, objects, etc., inspected.		definitive designs	11728
Inspection services, semiautomatic flight inspection program of FAA, unnecessary costs incurred, GAO report	8738	change	1669
Inspector General Office, Agriculture Dept., appropriations, 1965, hearings	10286	electric power distribution systems, operation	11733
		inactivation and reactivation	11730
		planning factors	11729
		utilities conservation program survey manual	5778
		naval stations, vigorous voluntary sports program, guide	16790
		planning dual-use shelters	9902
		port construction and rehabilitation, technical manual	19216
		protective construction, foreign research	7872
		repairs and utilities, work performance standards for post engineering, Army pamphlet	10009



# INDEX 1964

	Entry		Entry
Installations (military)—Con.		Instruments:	
undersnow structures, N-34 radar station, Greenland	17941	and apparatus for biological investigation and medical diagnostics, USSR study	18340
Installation credit:		and laboratory equipment, Federal item identification guides for supply cataloging	12293
commercial banks, holdings, monthly report	3361	supplement	8474
consumer credit—		atomic, engineering materials list	21617
at consumer finance companies	3360	electromagnetic, earliest	21799
monthly release	3359	biological research and medical diagnostics, USSR study	16156
Instinct, modern problems in physiological studies of instincts, USSR translation	2598	building, USSR—	
Institute for State Control of Drugs and Pharmaceutical Research, Rumania, research work	11010	news of higher educational institutions	2547, 5178, 5347
Institute of Atomic Physics, Rumanian Academy, report	1092	translations from <i>Izvestiya WUZov</i>	11135, 11237, 18382, 20057
Institute of Forest Genetics, care of pine seedlings, methods	2386	design, biological mechanisms, application	16654
Institute of Hydrotechnology and Melioration, Bulgaria, 10th anniversary	11183	maintenance course, suggested 1-year training program	575
Institute of Length Measurement of Advance Technical School for Machine Construction, East Germany, organization, functions, and achievements	7204	selected, and related products, current industrial reports	1816
Institute of Nuclear Physics, Rumania, report	18524	surgical techniques, drugs, and other surgical studies, USSR	6898
Institutions, institutionally acquired infections, proceedings of national conference, Sept. 4-6, 1963	20768	<i>see also</i> names and types of instruments.	
<i>see also</i> Child welfare institutions.		Insulating board, <i>see</i> Pulpboard.	
Instruction, <i>see</i> Programmed instruction.		Insulation:	
Instructor's guide IG series	6067, 8154, 13794	cryostats, low-cost system eliminates need for vacuum	18180
Instructors' journal	3398	electrical, color limits, military standards	10449
Instrument approach procedure charts, <i>see</i> Maps and charts.		electrically heated and cooled houses, proceedings of conference	15198
Instrument building (USSR periodical):		performance of cork as thermal protection material, free-flight test results	18766
translations	21576	workers, employment outlook	9421
Instrument flight rules:		<i>see also</i> Soundproofing.	
enroute air traffic survey, peak day, 1963	4679	Insurance:	
enroute IFR peak day charts, 1963	1751	agents and brokers, employment outlook	7381
Instrument flying:		bibliography	20788
attitude, Army technical manual	19215	earthquake, Alaska, provide for, hearings	12267
flight test guide for airplane instrument pilots	21322	industry—	
pilot examination guide	10582	employer expenditure for selected supplementary remuneration practices	21670A
training, Air Force manual	11790	mail order, guides	12411
Instrument landing, <i>see</i> Landing (aircraft).		insurance and risk management for small business	5684
Instrument men, <i>see</i> Instrumentmen.		miscellaneous bills and administration of programs, hearings	12160
Instrumentation:		occupations, employment outlook	7394
bio-instrumentation for control of of pressure chambers	21825	on Government-owned inventories, etc., held by Defense Dept. contractors, unnecessary costs, GAO review	19767
flight, far ultraviolet rocket spectrophotometry	9061	operations, veterans benefits manual	11074
geophysics and astrophysics	1737-39, 4254	publications, price list	1551
industrial, problems, USSR study	2765	selected health and insurance plans for salaried employees, digest, spring 1963	9454
instrumentation papers	13631-632, 19156-159	<i>see also</i> types of insurance.	
journal of research, National Bureau of Standards	3630, 13271	Insurance companies, <i>see</i> Life insurance companies.	
measurement of structural behavior of, concrete gravity structures, engineering manual, change	19654	Insured banks, <i>see</i> Banks and banking.	
radiochemical analysis	16741	Insured unemployed, personal and economic characteristics (periodical)	3590
satellite, use of solid circuits	14836	Integral coolant channels simply made by melt-out method	14807
transistorized system for acoustical data acquisition	20608	Integral equations, <i>see</i> Equations.	
Waterways Experiment Station capabilities	634	Integral neutron thermalization	13692
Instrumentmen:		Integrals, <i>see</i> Fresnel integrals.	
employment outlook, repairmen	9433	Integrated system for collecting and analyzing environmental test data	14863
1 & C, Navy training course	18848	Integration, <i>see</i> Race problems.	
3 & 2, Navy training course	5583		

# JANUARY-DECEMBER

	Entry		Entry
		Interbranch balance of Polish industry for 1961 in physical terms, study	9153
		Intercalibration of major North American networks employed in monitoring airborne fission products	18860
		Intercardiac operations analyzed, USSR	12772
		Interdepartmental Committee on Children and Youth:	
		report, 1963	195
		report, 1964	21038
		Interdepartmental Committee on South Bend Studebaker Shutdown, report, abstracts from	13656
		Interest (psychology):	
		physiology of act of attention, USSR study	5206
		Interest and usury:	
		home mortgage interest rates and terms	3576
		interest bearing U.S. Government securities available for investment of short-term cash balances of local and State Governments	1637
		interest rates at home and abroad (remarks)	19706
		interest rates, recent trends	2327
		unnecessary interest costs incurred by Gov't because of improper retention of overpayments by Burroughs Corporation, GAO report	10623
		utilizing FHA sec. 221(d)(3) below market rate	16903
		Interest equalization tax act:	
		digest of testimony, etc.	10348
		hearings	14134
		law	17421
		reports	2075, 6302, 15724,
		interest rates, see Interest and usury.	17592
		Interfaces:	
		liquid vapor—	
		hydrostatic stability in low-acceleration field	18771
		time response after entering weightlessness	18782
		Inter-Faith Consultation:	
		5th, on social welfare programs, minutes	6830
		6th, on national welfare needs, minutes	12532
		Interference properties of photons	4230
		Interferometers, microwave measurements of electron-ion recombination in nitrogen, air, and argon, errata	1452
		see also Michelson-stella interferometer.	
		Intergovernmental Committee for European Migration, field inspections of operations under Public law 86-648 (fair share refugee act), report	2064
		Intergovernmental relations:	
		Federal system as seen by State and local officials, results of questionnaire	2238
		Investigation, authorization, report.	6446
		Intergovernmental Relations, Advisory Commission on, see Advisory Commission on Intergovernmental Relations.	
		Interior and Insular Affairs Committee, House:	
		calendar	3651
		committee print	10319
		hearings	403,
		6359-62, 8385-86, 10317-319,	
		12137-141, 14006-8, 15590-592,	
		19512-513.	
		Integration (mathematics):	
		numerical integration of differential equations by power series expansions	21773
		Intellect, mental development, problems, USSR study	10929
		Intellectuals, union staff, in labor movement (statement)	2974
		Intelligence, see Intellect.	
		Intelligence (military science), see Military intelligence.	
		Intensity of vertical transfer of waters in ocean, USSR	10810
		Interaction of expanding cylindrical plasma with external magnetic field	20626
		Interagency Committee on Oceanography, ICO pamphlet series	8535-39
		Interagency coordination in drug research and regulation, hearings	8445, 19598
		Interagency coordination in environmental hazards (pesticides):	
		hearings	6510, 17878
		print additional copies, reports	15689,
		17511	
		Interagency motor pool systems service guide	15938
		Interagency training programs:	
		1963-64, mid-year supplement	6098
		1964-65	13804
		Inter-American Development Association, foreign assistance appropriations, 1965, report	13952
		Inter-American Development Bank:	
		appropriations, 1964—	
		hearings	2229
		law	1985
		reports	2069,
		2098-99, 2103, 2220,	12045
		foreign assistance appropriations, 1965—	
		hearings	12117, 19588
		law	21126
		reports	13950, 19582
		operations, Apr. 1960-Mar. 1962	4432
		participation of United States—	
		increase—	
		hearings	530
		law	6170
		report	2213
		statement of Secretary of Treasury Dillon	1640
		semiannual reports	12017, 17448
		resources, increase, special report	12020, 21163
		role in social and economic development of Western Hemisphere (address)	9859
		social progress trust fund agreement, protocol	9824
		special operations fund, participation of United States, increase, hearing	17643
		Inter-American Economic and Social Conference, Punta del Este 1961, Che Guevara's speech	1289
		Inter-American Economic and Social Council, see Organization of American States.	
		Inter-American Highway:	
		agreement with, Guatemala	3158
		program in Costa Rica, unnecessary costs resulting from inadequacies in administration of right-of-way activities, Public Roads Bureau, Commerce Dept., GAO report	12498
		report on Darien Gap and progress toward completion	10343
		Inter-American program for social progress, see Latin America.	
		Inter-American Republics, see American Republics.	

# INDEX 1964

	Entry		Entry
Interior and Insular Affairs Committee, House—Continued		Interior Department—Continued	
investigations and studies, authorization, report	6309	power marketing agencies—	
reports	332	appropriations, 1964, public	
335, 841, 344, 359, 371-372, 375, 385, 2012, 2030, 2034-35, 2041, 2068, 2091, 2093, 2095, 4453-55, 6227, 6268, 6275, 6280, 6299, 6304, 6321, 6328, 6330-31, 8292, 8294-96, 8298-99, 8300, 8319-22, 8324, 8331-32, 8338, 10220, 10233, 10260, 10262-263, 10280, 12060, 12084-85, 12105-110, 13953-970, 15427-428, 15480, 15490-494, 15502-503, 15529, 15550, 15559-561, 15571, 15576, 17475, 17527, 17556-558, 17571, 17578-579, 17594, 17598, 17600-601, 17621-622, 17626.		works, hearings	519
Interior and Insular Affairs Committee, Senate:		appropriations, 1965, public	
calendar	3670	works—	
committee prints	2240, 8451, 12273	hearings	15797
hearings	534-536, 2241, 4585-88, 6512-13, 8448-50, 10424-425, 12267-272, 14140-146, 15808-810, 17879-880, 19601-602, 21240.	law	17370
investigations and studies, expenses, report	6448	report	17572
reports	486-488, 492-501, 504, 2162, 2185, 2188, 2190, 2195, 2214, 2222, 2224, 4525, 6463, 6472, 6487-88, 8418, 10404, 10407, 14031, 14050, 14052, 14054, 14061-62, 14067, 14072, 14077, 15641, 15658, 15714-722, 15734-738, 15743, 15745-748, 15756-757, 15775-781, 17688-689, 17707-708, 17710-711, 17713, 17762-763, 17773-777, 17779-784, 17789, 17796-797, 17824-826, 17835, 17838-846, 19580, 19583, 21226-228.	press releases	3894
Interior decoration for Veterans Administration hospitals	16907	program for conservation etc., of anadromous fish in cooperation with several States, authorize—	
Interior decorators, and designers, employment outlook	9400	hearings	15597
Interior Department:		report	17546
appropriations, 1963, supplemental, proposal	1990	publications	19817
appropriations, 1964—		report, 1963	6833
deficiency, hearings	10285	saline water research and development progress reports	845-848, 6835-36, 8798-8802, 10673-680, 15974, 18162-163, 19813-816.
public works—		totem poles at entrance to Secretary's office, stories	2444
law	1984	Interlocking directorates, communications carriers, applications, FCC rules and regulations	3095
reports	343, 510, 4458	Intermetallic compounds, <i>see</i> Metals.	
appropriations, 1965—		Intermountain Forest and Range Experiment Station, annual report, 1963	10585
amendments	12030, 15612	Intermountain region:	
hearings	6338, 8436	Forest Service, yearbook, 1962	14297
law	13904	national fire-danger rating system, using conversion tables	12454
reports	8288, 8420, 13951	timber story	12436
supplemental proposals	15415, 15419	Intermountain States, your guide to farm jobs	4662
code of Federal regulations	6656	Internal revenue:	
supplement	10541	act of 1962, summary of Senate amendments to H.R. 10650	12264
decisions	3602, 18161	act of 1963—	
digest	4831	hearings	529
film catalog	12540	provisions agreed upon, brief description, press release, compilation, committee print	4513
Gold Procurement and Sales Agency, establish, hearings	534	staff description of H.R. 8363, as passed by House of Representatives	12262
lands administered, classify for disposal or interim management under multiple use principles—		summary of principal provisions of H.R. 8363	4512, 12162
hearings	15810	act of 1964—	
law	19415	comparison of provisions of H.R. 8363, with present law, Treasury recommendations, Senate Finance Committee version, Senate version, and as agreed to by conferees	6372
reports	8294, 17824	law	6183
Library, list of accessions	3681	print additional copies, report	6318
Missouri River Basin, progress	3941	reports	6293, 6441
Pacific Southwest Water Plan, fact sheet	7719	print additional copies, report	6272
		summary of provisions of H.R. 8363—	
		as agreed to by conferees	12260
		as reported by Senate Finance Committee	12261
		code of Federal regulations	4710-13, 4845-46, 6665-68, 8570-73, 8807, 10538, 10688, 12549.
		code of 1939, release of liability under bonds with respect to installment obligations transmitted at death—	
		law	17428
		reports	10206, 15784, 17614
		code of 1954—	
		reacquisitions of real property, limit amount of gain and prevent deduction for bad debts—	
		law	17428
		reports	15784, 17614

# JANUARY-DECEMBER

	Entry
Internal revenue—Continued	
code of 1954, amend—	
digest of testimony, etc.	10348
hearings	529, 14134
laws	6183,
17343, 17398, 17421, 17429	
print additional copies, report.	6318
reports	2075,
6293, 6302, 6441, 8317-18, 8335,	
12047, 13946, 13962, 15701-702,	
15724, 17592, 17615, 17748,	
19579	
print additional copies, report.	6272
summary	4512
unrelated business taxable in-	
come—	
law	15397
reports	8344, 14068
code of 1958, amend—	
law	17412
reports	15700, 17616
decisions, weekly	4094
depreciation guidelines and rules	
for tax purposes, revenue pro-	
cedure 62-21, 1964	21371
Internal revenue bulletin	3603
semiannual cumulative	10682
procedure and administration, IRS	
looseleaf regulations system	3698,
4838-39, 8806, 10687, 12547,	
15980, 19821.	
refunds and credits on taxes, re-	
port	21168
tax rate extension act of 1964—	
law	15384
reports	12083,
12089, 13955, 14057	
see also Income tax—Taxation—	
also names of certain taxes,	
e.g. Employment taxes.	
Internal revenue agents, tax specialist	
and professional accountant	850
Internal Revenue Service:	
administration program (remarks)	7824
Alcohol and Tobacco Tax Division,	
laws enforced, guide for law	
enforcement officers	14366
career opportunities—	
estate tax examiner	4834
revenue agent, professional ac-	
counting	4840
revenue officer	4841
special agent	4842
tax technician	4844
careers, civil service	4833
circular	6837
conference and practice require-	
ments, code of Federal regula-	
tions	10688
looseleaf regulations system	8803-6,
14367	
employment tax	3696,
4836, 12545, 15978	
estate and gift tax	853-854,
3695, 10686, 12544, 15977	
excise tax	855-856,
2447, 3697, 4837, 12546, 15979	
income tax	851-852,
2446, 3694, 4835, 6839, 10684-	
685, 12542-543, 15975-976.	
procedure and administration	3698,
4838-39, 8806, 10687, 12547,	
15980, 19821.	
news releases	3895
publications containing helpful tax	
information, list	1549
report, 1963—	
departmental edition	6838
document edition	6218
rules governing practice of attor-	
neys and agents	19002
special enrollment examination,	
1964, general information	10683

	Entry
Internal Revenue Service—Continued	
statistics of income, 1958-59, link	
of corporation data and census	
establishment data	19306
technical information release	14368
travel, entertainment and gift ex-	
penses, rules for deducting	
from income tax	2448
Internal Revenue Taxation Joint Com-	
mittee, summary of the Presi-	
dent's 1963 tax message	4514
Internal review guide, Army pam-	
phlet	15267
Internal security, see National	
security.	
in force, list	5710
treaties and other international	
agreements—	
1962	5711
1963	7800
see also subjects, names of coun-	
tries, etc.	
International Agricultural Develop-	
ment Service, appropriations,	
1965, Agriculture Dept., hear-	
ings	10286
International arbitration, see Arbitra-	
tion.	
International Association of Govern-	
mental Labor Officials:	
convention proceedings, 1963	7366
crucial role in improving labor leg-	
islation (remarks)	16576
International Association of Indus-	
trial Accident Boards and	
Commissions, proceedings of	
annual convention, 1963	16578
International Association of Mach-	
inists, AFL-CIO, emergency	
board report	4653
International Atomic Energy Agency:	
atomic energy safeguards, applica-	
tion to United States reactor	
facilities, agreement	18984
role in development of standards	
for peaceful international atom	
(remarks)	21020
U.S. participation, report 1962	6211
International Bank for Reconstruc-	
tion and Development:	
capital stock increase—	
law	258
proposal, special report	277
increased flexibility of international	
monetary institutions, etc., to	
meet changing economic prob-	
lems of a changing world (re-	
marks)	19704
operations, Apr. 1960-Mar. 1962	4432
participation of U.S., semiannual	
reports	12027, 17448
International Bank of Mutual Eco-	
nomical Cooperation, East Euro-	
pean, translations	9305
International Biomedical Research,	
1st National Institutes of	
Health International Sym-	
posium	18815
International Boundary and Water	
Commission, United States and	
Mexico:	
appropriations, 1964, supplemental	
proposal	10358
appropriations, 1965, supplemental	
proposal	19532
flood control works, joint construc-	
tion, etc., conclusion of agree-	
ments—	
hearings	14000
law	17270
reports	13966, 15709
International boundary studies—	
9799-9800, 11622, 15099-101,	
18958.	



# INDEX 1964

Entry	Entry
International Brotherhood of Teamsters, Chauffeurs, Warehousemen, and Helpers of America: relationship with Mine, Mill & Smelter Workers, threat to national security—	
hearings -----	15811
report -----	17883
International Civil Aviation Organization, convention on international civil aviation, amend protocol, report -----	423
International claims settlement act of 1949, <i>see</i> Claims -----	
International coffee agreement, 1962, authorize procedures to carry out obligations—	9816
hearings -----	6505
reports -----	6490, 17581
International commerce (periodical)—	3605
index, quarterly -----	4848
supplements -----	4865-66, 6861, 10690, 10707, 12557-559
International Commerce Bureau: International business publications, checklist -----	14369
press releases -----	3897
International Commission for Supervision and Control in Laos: U.S. share in cost of operations—	
hearing -----	8380
law -----	17327
reports -----	13967, 15564
International Commission on Radiological Units, and Measurements: -----	
insert -----	1491
recommendations on radioactivity, addendum -----	3043
recommendations, physical aspects of irradiation -----	5544
International Confederation of Free Trade Unions (ICFTU): -----	
directory -----	9632
International Conference on Public Education, recommendations -----	4870
International Congress on Education of the Deaf, proceedings, print as Senate document, reports -----	597
reports -----	15680, 19475
International cooperation: -----	
Antarctica, U.S. policy -----	19447
financial, meaning (remarks) -----	20860
programs for international cooperation year, 1965 -----	11623, 21880
International Development Agency: A.I.D. and universities, strengthening partnership -----	12561
AID financed awards -----	3227
AID program, general information, appropriations, 1964 -----	15989
hearings -----	2229
law -----	1985
reports -----	2069, 2220
2098-99, 2103, -----	
biographic register -----	1595
commodity code book -----	12564
community development abstracts, counterpart funds and foreign currency accounts -----	21374
economic development projects for assistance to Central Treaty Organization Agency, State Dept., GAO report on examination -----	3384
field staff, Foreign Service list -----	8712
Investment Guaranties Division, report, quarterly, applications in process -----	3524
loan authorizations, etc., semiannual reports -----	3957
operations report -----	12027
3823 -----	
International Development Agency—	
Continued -----	
personnel administration and operations—	
hearings -----	4569
report -----	4520
print as Senate document, report -----	4538
reports on implementation of Humphrey amendment to foreign assistance act of 1961 -----	10355, 21219
print as Senate document, report -----	19574
United States missions, housing, building, and planning, bibliography -----	18156
winning cold war, U.S. ideological offensive, hearings -----	8382
International Development Association: -----	
foreign operations appropriations, 1965—	
hearings -----	12117, 19588
law -----	21126
reports -----	13950, 13952, 19582
operations, Apr. 1960-Mar. 1962—	4432
participation of United States—	
increase resources—	
hearings -----	530, 2107, 8371
reports -----	514, 8339, 10236
statement of Secretary of Treasury Dillon -----	1640
semiannual reports -----	12027, 17448
resources, increase, authorize—	
hearing -----	4491
law -----	12005
reports -----	4460, 6290
International Educational and Cultural Affairs, Advisory Commission on, <i>see</i> Advisory Commission on International Educational and Cultural Affairs -----	
International exchanges: -----	
agreement with USSR -----	15118
agricultural delegation to USSR, report, 1963 -----	14173
educational and cultural diplomacy, 1962 -----	3145
educational exchange program in Italy, experiment in international understanding -----	11616
foreign visitor programs, State Dept., objectives, etc. -----	7768
teacher exchange program, 1965-66 -----	15859
United States cultural and artistic exchanges, hearings -----	2112
United States student and leader exchanges, hearings -----	2112
<i>see also</i> subjects -----	
International Exposition for Southern California, 1968: -----	
recognition—	
law -----	17355
reports -----	17519, 17729
International Federation for Documentation, work of 29th conference, Sept. 30-Oct. 6, 1963, -----	16282
International Finance Corporation: -----	
operations, Apr. 1960-Mar. 1962—	4432
participation of U.S., semiannual reports -----	12027, 17448
International flight information manual -----	11811
amendments -----	4270, 15248, 20976
International Geophysical year, 1957-58: -----	
aurora and airglow—	
articles -----	13262
research, results -----	9621, 13263
world weather maps -----	5758, 7842, 9880, 11688, 13527-528

# JANUARY-DECEMBER

	Entry
International Home Loan Bank, establish, hearings	4490
International Indian Ocean Expedition: Azov and Black Sea Research Institute of Marine Fisheries and Oceanography, summary of work	7170
ocean survey ship, USC&GSS Pioneer	6110
International labor (periodical)	3607
International Labor Conference: 46th, convention adopted	1994
1963, general information	5442
U.S. participation, hearings	19504
International Labor Organization: conference in Geneva—appoint delegates to attend, report	10235
convention adopted at conference	1994
Peace Corps, agreement	3153
U.S. participation—hearings	2112
interim report, hearing	19503
report on hearings	6354
women, equal pay in member nations	5768
International Ladies' Garment Workers' Union: health center anniversary medal—law	265
report	458
International law: digest	5697
information for military lawyers	19207
sovereign immunity, policy research study	11625
International Law, Private, Hague Conference on, see Hague Conference on Private International Law.	
International Lead and Zinc Study Group, report on 7th session	10319
International Monetary and Financial Problems, National Advisory Council on, see National Advisory Council on International Monetary and Financial Problems.	
International Monetary Fund: Bretton Woods agreement act, amend, law	258
economic program to promote international expansion, etc. (remarks)	19009
increased international cooperation, flexibility of monetary institutions and arrangements, etc., benefits to be derived (remarks)	19704
operations, Apr. 1960–Mar. 1962	4432
participation of U.S., semiannual reports	12027
International notams, notice to air-men service	3608
International organization and conference series	1599–1600, 7769, 11623–624, 18959, 20821–822, 21880.
International organizations: field staffs of U.S. mission, Foreign Service list	3524
foreign operations appropriations, 1965, hearings	12117
legislation, amend, report	2183
United States contributions, 1963	19441
International Passamaquoddy Fisheries Board, scientific report (series)	8620
International politics, see International relations.	
International postal service: directory of international mail, changes	3426
international mail, general information	5631

	Entry
International Printing Week, designation, report	2221
International Publishers Congress: 17th, recognition and assistance—law	10141
reports	4551, 6333
International relations: America as a great power (address)	11620
American policy in international affairs	9999
Antarctica, U.S. policy and international cooperation	19447
code of Federal regulations	6664
Communist countries, why U.S. treatment differs (address)	9806
Communist offensives, methods of combatting (address)	7761
for commanders, this changing world	91–92, 1758, 3517, 4276–77, 5934–37, 8022, 9897–99, 11831–832, 13667, 15258–260, 17031–32, 19199, 20984–985.
foreign affairs outline (series)	13462, 20820
foreign labor market policies, lessons	15813
foreign policy briefs	3523
foreign policy of U.S.—American foreign policy, current documents, 1960	11614
investigation, extension, reports	4544, 6448
Soviet bloc developments, implications, hearings	8381
State Department bulletin	3414
U.S. policy toward Cuba	11621
foreign policy study, expenses, report	4472
foreign relations of U.S., diplomatic papers—American Republics, 1941—departmental edition	3143
document edition	1989
British Commonwealth, Eastern Europe, Far East, 1943—departmental edition	1596
document edition	275
Europe—departmental edition	13463
document edition	12016
Near East and Africa, 1943—departmental edition	11619
document edition	10153
foreign relations of United States, price list	16827
general foreign policy series	3144, 7761, 9796, 11620, 20819.
importance in international water transportation (remarks)	21301
international information and cultural series	3145, 7768
Latin American comments on current political events	7265
legislation on foreign relations, collection	12266
making of foreign policy, interview with Secretary of State Rusk	5796
making the world safe for diversity (address)	15260, 17031
Middle East, U.S. policies and programs, etc.	18961
mind your world, citizen's guide to international understanding	18960
Paris and the 3d world	10993
research studies completed, list	7759
research studies in progress, list	9795
responsibility of a global power (address)	20985
social science research studies in progress, list	20818
social welfare in country development (address)	19029

# INDEX 1964

Entry	Entry
International relations—Continued	International Union of Mine, Mill & Smelter Workers, relationship with International Brotherhood of Teamsters, Chauffeurs, Warehousemen, and Helpers of America, threat to national security: 15811
some U.S. Government agencies engaged in international activities 15103	report 17883
strategic importance of Western Europe, report 19453	International Whaling Commission, convention, amendments to schedule 5703
United States—	International Year of Quiet Sun, 1964-65, contribution of Heinrich Hertz Institute at Berlin-Adlershof, East German translation 7002
and Africa 16868	Interns, <i>see</i> Dentists—Dietitians.
balance of payments, our international accounts and how they affect our economy, explanation 15371	Interoceanic Canal Commission, appropriations, 1965, supplemental proposal 15416
ideological effort through Government agencies and programs, study 12132	Interparliamentary Group, Canada—United States, <i>see</i> Canada—United States Interparliamentary Group.
ideological operations and foreign policy report 10228	Interparliamentary Group, Mexico—United States, <i>see</i> Mexico—United States Interparliamentary Group.
policy—	Interparliamentary Union, U.S. participation, report, 1964 21167
Cuba 11832	Interplanetary Explorer, <i>see</i> Satellites.
southeast Asia 11831	Interplanetary missions, <i>see</i> Planets.
Vietnam 13462	Interplanetary space, <i>see</i> Outer space.
USSR, International economic relations, translations 1041.	Interpolation: error determination of astronomical-geodetic plumb-line deflections in west Bohemia Kraj, Czechoslovakia 2906
5168, 5402, 6923, 8975, 9263, 11039, 11078, 11214, 12954, 14518, 16466, 19852, 19929, 19938, 20032, 20105, 20325, 21479, 21636.	errors of astronomical-geodetic deflections of vertical in western Czechoslovakia, determination 12623
weapons system, International control, excerpts and bibliography for 1964-65 high school debates 12167	Interpretative bulletins, Wage and Hour and Public Contracts Divisions 1653.
winning the cold war, U.S. ideological offensive—	3187, 7839, 9875, 11677-679, 13513, 15146, 16913-914, 19013-15.
hearings 2112, 4497, 8382	Interstate agreements:
report 10228	Breaks Interstate Park compact, amendment— 19410
report on hearings 6354	reports 15550, 17842
International report IR series 5765-68, 7861-63	Costilla Creek compact, amendment— 1927
International Research Group on Refuse Disposal, information bulletins 15056	law 492
International (Rome) Institute for Unification of Private Law: United States participation—	Delaware-New Jersey Delaware River Port Authority compact, consent of Congress— 4505
law 1973	hearing 13870
report 2216	reports 2087, 2187, 12210
International Rules of Judicial Procedure, Advisory Committee on, <i>see</i> Advisory Committee on International Rules of Judicial Procedure.	Delaware River Joint Toll Bridge Commission, supplemental agreement, report 346
International Rules of Judicial Procedure Commission:	Pennsylvania-Ohio compact, Pymatung Lake, amend rel. to use of motorboats, consent of Congress— 15388
establishment, amend act—	law 10230, 14081
law 17381	taxation of motor fuels consumed, by interstate buses, consent of Congress, report 17733
reports 2077, 17730	traffic safety compacts, consent of Congress to permit District of Columbia to join— 17325
International science notes, National Science Foundation 3610.	law 12228
5572, 7770	
International sugar agreement, 1958, protocol prolonging, text 6379	
International Symposium on Control of Cell Division and Induction of Cancer, papers 13285	
International Symposium on End Results of Cancer Therapy, papers 21792	
International system of units: physical constants and conversion factors 20540	
resolution no. 12 from proceedings of 11th General Conference on Weights and Measures, Paris, Oct. 11-20, 1960 7551	
International Telephone and Telegraph Export Corp., President's E award for export excellence (remarks) 19357	
International trade, <i>see</i> Commerce.	

# JANUARY-DECEMBER

try

811  
883

703

002

5416

1167

2906

2623

1653,  
-679,  
9013-

19410  
17842

1927  
492

4505  
13870  
12210

346

15388  
14081

17733

17325  
12228

	Entry
Interstate and Foreign Commerce Committee, House:	
activities, 88th Congress—	
1st session, report—	4461
1st and 2d sessions, report—	19492
calendar—	3652
committee prints—	12144-145
hearings—	404.
2114, 4500-1, 6363-64, 8387-88, 10320-326, 12142-143, 12146-147, 14009, 15593, 17653-656, 19514, 21206-208.	
investigations and studies, expenses, report—	2085
reports—	345-346.
381, 2062-63, 2080, 4461, 6288, 10217, 10219, 10225-227, 12052-53, 12086, 13973, 13975, 13980-984, 17533, 17547-548, 17582-583, 17628, 19468, 19492.	
Interstate carriers, see Carriers.	
Interstate commerce, see Commerce.	
Interstate commerce act, see Carriers.	
Interstate Commerce Commission:	
appropriations, 1965, hearings—	10290
commissioners—	
nomination of Lawrence K. Walrath and Virginia Mae Brown, hearing—	8442
nomination of Virginia Mae Brown, report—	10367
decisions (bound reports)—	872.
8838, 10712, 18190	
decisions (separates)—	3611-15
orders in judicial reference cases, jurisdiction and venue of appeals—	
law—	17372
reports—	2046, 17737
press releases—	3898
report, 1963—	
departmental edition—	6863
document edition—	6220
reports involving finance, consolidated index—	8836
rules of evidence discussed in transportation, proceedings, compilation—	6873
Interstate Commission on Potomac River Basin:	
appropriations, 1965—	
hearings—	8361, 17864
law—	19413
reports—	8343, 17778
Interstate compacts, see Interstate agreements.	
Interstate Conference on Labor Statistics, proceedings of 21st conference—	13086
Interstate trucking, see Motortrucks in freight service.	
Interviewing:	
and counseling, basic supervisory training course—	15082
guides for specific disabilities—	2293.
8501-2	
Intestinal coccidiosis, see Coccidiosis.	
Intestines:	
ameba, identification, self-instructional lesson—	20741
blood-sucking insects and ticks, vertebral leucocytes survival in, USSR study—	9007
common protozoa of man—	15045
large, histogenesis and age changes in epithelium, USSR study—	18353
Intoxicants, see Liquors.	
Intoxication, see names of poisons.	
Intracoastal Waterway, Gulf, transportation lines—	21280
Intra-industry management program helps business help itself—	3125
Intrusion alarm systems—	9901
Intubation of abnormal aorta of Alaskan ground squirrel—	7987

	Entry
Inventions:	
Armed Forces members, cash awards—	
hearings—	17637, 19591
report—	17530
Government owned, available for license, patent abstract series, supp—	15135
information aid for inventors—	21830
products list circular—	3940
wanted by Armed Forces, etc., lists—	1506, 5560
Inventories:	
automatic data processing equipment in Federal Government, 1964—	15600
Census Bureau, machine-readable data, etc., available—	13769, 17112
chemical analyses, published and unpublished, surface waters in continental U.S. and Puerto Rico, 1961—	6827
interstate carrier water supplies, by States and Public Health Service regions—	7698
livestock and poultry, 1964—	7804
manufacturers—	
Census Bureau series, descriptions and procedures—	17109
current industrial reports—	189, 3706
industry survey—	3593
1947-63—	188
1953-63, chart book—	15306
value—	155
change sheet—	1805
municipal waste facilities, 1962—	3101-9
statistical summary—	15068
errata—	16834
municipal water facilities—	18906-914
national, school facilities and personnel, spring 1962—	6372
plant, material received by New Crops Research Branch—	15200
preliminary inventories series—	5538,
9629, 20633-635	
real property—	
leased to United States throughout world, 1963—	8748
owned by U.S. throughout world, 1963—	6794
State equal pay legislation—	20885
steel mill shapes, summary 1963 and 1962—	11897
Inventors:	
earliest electromagnetic instruments—	21799
patents and inventions, information aid—	21830
Invertebrates, populations of simplest structure, analysis of production process, USSR study—	18548
Inverters:	
high power static, optimization study—	13140
silicon controlled rectifier, circuit controls transients—	14815
Investigators, CSC career opportunity—	4380
Investment casting, see Founding.	
Investment companies:	
act of 1940, releases, SEC—	3617
small business—	
act of 1958, amendments—	
hearings—	2109
law—	6184
reports—	466, 2097, 4482, 19571
licensed by SBA—	1581
program, hearings—	14018
tax treatment, amend act, report—	19579
Investment Guaranties Division, see International Development Agency.	

Do not order from index; see indicated entry

Page 361



# INDEX 1964

	Entry		Entry
Investments:		Ion beams, design of new apparatus	
advantages of series E savings		for increasing power density	13187
bonds	18935	Ion dissociation:	
aids to business, overseas	19827	in drift tube of time-of-flight mass	
capital expenditures at manufactur-		spectrometer	4228
ing establishments, 1951-		time-of-flight mass spectrometer—	
62	11888	adapted for studying	66
District of Columbia, legal invest-		observation and identification of	
ments for trust funds, lists	4610,	processes in drift tube	52
	15834	observation of 2.1 charge trans-	
factors in—		for	19172
Indonesia	18176	reactions in drift tube	5873,
Republic of Korea	14382		13637, 19167
Turkey	2459	Ion exchange:	
forest rates-of-return, determining		membrane technology pertaining to	
by electronic computer	8694	saline water desalination, bib-	
guaranties—		liography	848
agreement with—		milk, USSR study	9001
Bolivia	11637	Ion exchange resins, see Resins.	
China	7794	Ion rocket engines, see Rockets.	
Kenya	13479	Ion thrusters:	
Mali	20835	electron-bombardment—	
Morocco	3151	experimental evaluation of size	
Sierra Leone	5701	effects on steady-state control	
Somali Republic	7797	properties	20597
Sudan	11633	filament deterioration	11382
Tanganyika	3160	heavy-molecules as propellants	7493
Panama, housing program, staff		steady-state control properties	7538
survey team report	10313	Ionic crystals, see Crystals.	
individuals, in savings accounts,		Ionite, use in milk fed infants suffer-	
etc	3618, 8546	ing with gastrointestinal tract	
investment advisers act releases,		diseases	5027
SEC	3616	Ionization:	
nonfarm mortgages, life insurance		chemical relaxation behind shock	
companies, 1963	15889	waves in carbon dioxide	7529
private, in Latin America	12013	metals, USSR studies	20252
hearings	6193	photoionization—	
Investors:		atomic oxygen	14779
protection in securities markets—		cross sections of rare gases	14781
hearings	8388	time-of-flight mass spectrometer	
law	17326	adapted for studying	66
reports	12053, 13978	physics, USSR studies	12799
special study, report	276	solutions of ionized radiating shock	
Inyo County, Calif., geology of Cerro		layer	1485
Gordo mining district	4788	volume ion production in tenuous	
Inzhenerno-fizicheskii zhurnal (peri-		helium plasma	13241
odical):		Ionization chambers, environmental	
translations	2689, 2021, 5029,	radiation measurements	1770
5320, 5327, 7194, 8979, 9004		Ionization gages, Bayard-Alpert, ef-	
Inzhenernyi zhurnal (periodical):		fects of cesium vapor	9609
translations	2935, 7019, 16300, 18322	Ionized gases, see Gases.	
Iodides:		Ionizing radiation:	
compact hafnium production by io-		and metabolism processes, sum-	
dide method, USSR study	2665	mary	4262
hafnium (IV) iodide, vapor pres-		chemical dosimetry, USSR studies	19892
sure by metal diaphragm tech-		effects on—	
nique	9500	hereditary molecular structures,	
triiodide/iodide reaction on plat-		USSR study	1008
inum-electrode in neutral solu-		lipids of fish	19251
tion, kinetic reactions	7653	plants	1769
Iodine:		exposure during pregnancy, conse-	
comparison of mineral excretion in		quences, USSR study	2768
arm and total body sweat	19223	extending shelf life of fruits and	
minerals yearbook chapter	16629	vegetables	5987
Iodine isotopes:		pathological anatomy of acute rad-	
Iodine-131—		iation sickness in experiment,	
content of milk, effect of evapo-		atlas	4291
ration and powdering proc-		space, protecting human beings,	
esses on	20747	USSR study	7082
food-chain relationships follow-		stability of functionally heterogen-	
ing 2 nuclear tests in Nevada		ous portions of DNA, USSR	
for Project Sedan	123	study	14623
in post-mortem human thyroids	20759	USSR studies	20061
measurement in bovine thyroids	7697	Ionosphere:	
milk, farming practices effect on		behavior during solar eclipse, July	
concentration	16833	20, 1963, Bedford, Mass.	7964
surveillance measurements in		computer program for mapping by	
milk, analytical quality control		numerical methods	3048
service of Radiological Health		ducting, investigating with ORBIS	
Division, interlaboratory		beacon	5875
study	20743	east-west propagation paths, sunrise	
radio-active, dosimetric measure-		effects	13629
ments in therapeutic work,		electron concentration, using arti-	
USSR study	2487	ficial satellites for measure-	
		ment, USSR study	19874

	Entry		Entry
Ionosphere—Continued		Iowa—Continued	
electron density, use of hf lunar reflection circuit in study.....	5609	municipal waste facilities, 1962 inventory.....	3106
Martian and Cytherian, theoretical study.....	14868	municipal water facilities.....	18911
mode sum for LF, VLF, ELF terrestrial radio wave fields.....	20639	precipitation data, hourly.....	3578
observations of ionospheric wind patterns through night.....	20962	shales, clays, and loess, for lightweight aggregates, expansion properties.....	9510
perturbations, solar flares, and geomagnetic storms, correlations observed by probing.....	16995	southern, establishing vegetation on exposed subsoil.....	4197
predictions, Central Radio Propagation Laboratory.....	3310	women—	
probability of radio communications through layer E.....	20058	family and property law, summary.....	5764
quiet, mean electron density variations.....	3047	labor laws, summary.....	9893
reaction rate equations, solution.....	55	workers, 1960.....	9897
research by satellites, agreement with Canada.....	15112	IQSY, see International Year of Quiet Sun, 1964-65.	
Soviet research.....	993	Iran:	
studies with small multipurpose rocket payload.....	13240	agricultural commodities, agreement.....	18964
temperatures obtained from photography of shock waves.....	20963	citizen, instruction at Military Academy, West Point, report.....	15518
upper, Explorer VIII satellite measurements.....	13222	cotton.....	14292
VLF radio waves propagation by ionospheric disturbances.....	7580	cultural exchange and financing of exchange programs, agreement.....	1622
Ionosphere, Conference on Non-Linear Processes in the, see Conference on Non-Linear Processes in the Ionosphere.		fishing industry, 1962-63.....	6719
Ions:		labor conditions.....	13090
alkali metal ions on tungsten, application of atom-metal interaction theory to adsorption.....	18784	market factors.....	8811
dissociation—		petroleum industry.....	7427
in drift tube of time-of-flight mass spectrometer, identifying fragment ions.....	4228	selling in.....	18182
processes occurring in drift tube of time-of-flight mass spectrometer, observation and identification.....	52	Turkish boundary, study.....	7766
double layer and electrostatic adsorption, USSR study.....	14456	U.S.S.R. boundary, study.....	7763
electron and ion emission, USSR study.....	3035	Iraq:	
field emission, Soviet research, bibliography.....	5550	agricultural commodities, agreement.....	5705
incidence, sputtering at oblique angles.....	9595	Democratic Party of Kurdistan, 6th congress.....	20121
interaction of atomic particles with surface of metal.....	8047	economy, basic data.....	6847
multiple charged ions survey.....	14942	labor conditions.....	5443
positive, mobility in their own gas sources, thermionic emission, for isotopic analysis of lithium.....	16713	Turkish boundary, study.....	7765
spurious fragment peaks originating from normal ions heavier than dissociating parent ion.....	5873	Iredell County, N.C., soil survey report.....	18954
see also ions by name, e.g., Cesium.		Ireland, Burdge, chemical quality of surface waters in Brazos River basin, Tex.....	18149
Iorns, W. V., water resources of upper Colorado River basin, basic data.....	19786	Ireland:	
Iowa:		atomic energy, cooperation for civil uses, agreement.....	7796
annual survey of manufactures, 1962, standard metropolitan statistical areas, and large industrial counties, statistics.....	6028	beef and veal, trade agreement.....	9830
climatic summary, 1951-60, decennial census.....	19022	economy, basic data.....	863
climatological data.....	3329	electromechanical fishing and counting fence used.....	14267
electric rate book.....	17980	foreign trade regulations.....	14386
labor organizations, reporting, register.....	16573	maritime matters, public liability for damage caused by N. S. Savannah, agreement.....	20845
Mississippi River and tributaries, fishery products, wholesale dealers, list.....	4739	sailing directions, change.....	20670
		IRGR, see International Research Group on Refuse Disposal.	
		Iron:	
		alloys, electroslog remelting effect on plasticity, USSR study.....	1014
		blast furnace, thermochemical model, developing.....	7454
		carbon alloys, surface properties.....	3037
		catalysts.....	
		kinetics of Fischer-Tropsch synthesis.....	13103
		self-generated carbon-expanded for synthesis of methane.....	11331
		chemical composition, computer calculation during pouring from mixer to converter, USSR study.....	16202
		foundries, current industrial reports.....	3390
		industry—	
		employment outlook.....	9447
		review of 1963, outlook for 1964.....	6010
		iron and steel—	
		mineral industry survey—	
		annual.....	18671
		monthly.....	3619

# INDEX 1964

	Entry		Entry
Iron—Continued		Irrigation—Continued	
iron and steel—Continued		SCS national engineering hand-	
minerals yearbook chapter-----	21693	book-----	11612
scrap, monthly-----	3620	Snake River basin, Idaho, use of	
final data-----	3621	ground water-----	15956
low copper and sulfur content, re-		tubing, lay-flat, hydraulic and geo-	
covered by smelting copper re-		metrical relationships-----	19103
verberatory slags-----	14762	USSR—	
ores—		discussion of problems at Febru-	
anionic flotation of silica, Mesabi		ary plenum of Central Commit-	
and Menominee Range-----	9516	tee CPSU-----	14650
ARA technical assistance in major		economics of irrigated agricul-	
problems of redevelopment		ture, translation-----	18468
areas-----	11826	see also Canals—Reclamation of	
deposits in St. Lawrence magnet-		land—also names of reclama-	
ite district, northwest Adiron-		tion projects.	
dacks, N.Y.-----	15947	Irrigation districts, see names of dis-	
Lake Superior region, R-N process		tricts.	
application, engineering		Irrigation projects, see Reclamation of	
studies-----	8018	land—also names of projects.	
Mesabi Range, feasibility of		IRS, see Internal Revenue Service.	
Krupp-Renn process for treat-		Irving, Donald R., technologic trends	
ing, digest-----	13665	in mineral industries (metals	
mineral industry survey,		and nonmetals except fuels)-----	1446
monthly-----	3622	Irving M. Robin Chemical Co., Inc.,	
minerals yearbook chapter-----	21694	relief-----	2002
prereduced pellets, production		Irwin, Kirk S., lag in aircraft altitude	
and smelting-----	20499	measuring systems-----	4233
production, etc. 1963-----	5478	Irwin, L. Mark, laboratory smelting of	
tailing from Champion mine,		copper precipitator dust-----	5483
Marquette Range, Mich., flota-		Is Europe our market?-----	861
tion treatment-----	20508	Isaacson, Peter A., length-weight rela-	
phase transformations in iron-		tionship and stomach contents	
vanadium system, USSR		of the swellfish in York River,	
study-----	19867	Va-----	6707
polycrystalline, cleavage fracture,		Isakson, G., natural frequencies in	
micromechanisms-----	13437	coupled bending and torsion of	
prospect, North Bradfield River,		twisted rotating and nonro-	
Alaska, geology-----	2414	tating blades-----	14778
pyrophoric hydrogen-reduced pow-		Iseley, Erwin E., soil survey report,	
der, melting for steel produc-		Treutlen County, Ga-----	13458
tion-----	9522	Iseri, Yukio, relief-----	300, 1897
Red Mountain formation, Ala.,		Island lantern (periodical)-----	3623
rocks, relation between specific		Isle Royale National Park, general	
gravity and iron content-----	4781	information-----	16767
scrap, minerals yearbook chapter-----	20482	Isler, D. A., spray distribution pat-	
see also Cast Iron.		terns from Piper PA-18A air-	
Iron castings, see Castings.		plane flying at 50 feet-----	13566
Iron ores, see Iron—also name of spe-		Isleta, N. Mex., railroad accident-----	8842
cial iron ore, e.g. Ilmenite.		Islip, N.Y.:-----	
Iron oxides, pigments, minerals year-		hydrology of area-----	18147
book chapter-----	18672	population, special census of town-----	15321
Iron phyllosilicates, Cuyuna and		Isolation:	
Mesabi districts in Minnesota-----	9511	stress and fatigue under conditions	
Iron sulfide, heats and free energies of		of isolation from external stim-	
formation-----	16644	uli, USSR study-----	12918
Iron workers, see Ironworkers.		vibration, satellite tape recorders-----	7492
Ironworkers, structural, ornamental,		Isostasy, European isostatic anom-	
and reinforcing, employment		alies, data indicates nature of	
outlook-----	9424	vertical movements of earth's	
Iroquois Indians:		crust, USSR study-----	6879
music and dance-----		Isothermal flow of air through snow	
departmental edition-----	9992	of variable permeability-----	19649A
document edition-----	10154	Isotopes:	
Irradiation, see Gamma rays—Radiation—X-rays.		development—	
Irradiators, gamma, radiopasteuriza-		AEC program, hearings-----	8235
tion of fruit produce, concep-		isotope techniques for relocation	
tual design study-----	5986	of land monuments, report-----	19253
Irrationality of Communism, print		program, contract scope state-	
additional copies, report-----	17567	ments-----	8074
Irrigation:		developments-----	3624
aquatic herbicides in water, toler-		double derivative dilution analysis	
ance of certain crops-----	5863	for food additives-----	5974
Bulgaria, regional breakdown of		Hanford production plant engineer-	
areas on basis of aridity and		ing study-----	8057
natural water supply-----	12951	isotopes and radiation technology,	
cotton, in southeastern United		review of recent developments-----	3625
States-----	11753	Oak Ridge Radioisotope Conference,	
ground water for Fort Hall Indian		proceedings, 1964-----	11869
Reservation-----	2426	radioactive—	
quality of surface waters, Western		and construction industry-----	1768
States-----	4819	and fish, USSR studies-----	1243
		contamination, diagnosis and	
		treatment, USSR study-----	4924

	Entry		Entry
Isotopes—Continued		Israeli Labor Party, ideological principles	1300
radioactive—continued		It pays to stay in, new pay act of 1963	11830
marine organisms, accumulation coefficients data, USSR study	10847	Italian socialist interviews leaders of French Left	12970
medical and diagnostic use, USSR study	5343	Italy:	
preparation in 1st Hungarian experimental nuclear reactor	2753	air transport agreement, arbitration	20823
production at Boris Kidric Institute, Vinca, Yugoslavia	7055	Communist Party—	
source fabrication, vibratory compaction techniques development	19239	debates international Communist unity	11096
radioisotopes—		Gramsci Institute lecture series on morals and society	21476
build-up factor in aquatic insects, USSR study	1288	national conference on organization, Naples, Mar. 12-15, 1964	9296
distribution in basic components of fresh-water bodies, USSR studies	1070	dollar problem, report on factfinding trip abroad	10412
dynamic clinical studies, symposium, proceedings	15286	education, progress and trends	8492
effects on life processes, bibliography	11865	educational exchange program, experiment in international understanding	11616
humane atom, at service of medicine (remarks)	11871	gasification patents, index	18660
in agriculture, bibliography	15283	heating equipment, residential, outlook for U.S. sales	21087
in world industry, abstracts of selected foreign literature	4302, 19248	index—digest of decisions, 1949-62	19745
measurements of piston ring wear and evaluations of engine oils	1777	Italian Communists view their party and Moro government	4926
power from radioisotopes	15292	machine tools industry and market potential for U.S. specialized machine tool manufacturer	12551
radioisotopic methods for automatic control, reports of all-Union conference	19228	market for semiconductor devices	13740
shielding design manual	13703	plant quarantine requirements	15203
techniques, radiochemical analysis	16741	pocket guide	8023
tracer techniques in evaluation, etc., of industry practices for removal of pesticide residues from foods	19243	safeguarding of classified information, agreement	20828
use as source of X-rays to develop Rayleigh scattering method for analysis of high Z atoms in low Z media	19254	Socialist Party, trade union policy	2591
technology development program, 5th annual contractors meeting, 1963	8081	Socialists present their economic policy	1062
world, technology, literature survey	116	trade agreement, exports of cotton velveteen fabrics, agreement	20827
see also names of isotopes, e.g., Carbon isotopes.		Itch, see Cattle scab.	
Israel:		Item analysis, airmen, test items across forms, comparison	9984
accessions list, Library of Congress, American Libraries Book Procurement Center, Tel-Aviv	14717	Ithaca, N.Y., population, special census of town	172
agricultural commodities, agreement	5709, 13468, 16877, 18973	Itkillik River, geology of region	19781
cardiovascular research, report	20647	It's your Children's Bureau	10083
central, Cenomanian-Turonian aquifer, its development and use as storage reservoir	21358	Ivory, J. E., system for measuring Seebeck coefficient and resistivity	20711
Communist and Communist-sponsored activities, translations	20310	Ivory Coast:	
Communist leaders statements	5405	agricultural commodities, agreement	11641
Communist Party activities	5305	agricultural economy	10456
extradition convention	7774	foreign trade regulations	14383
report	424	Peace Corps program, agreement	13472
foreign trade regulations	8833	Izvestiya VUZov (periodical):	
Israeli tourists visit to Vil'nyus, Soviet press report	29124	translation	11135, 11237, 12590, 14479, 14509, 18382, 20021, 20057, 21440, 21484, 21576.
job vacancy statistics	11288		
labor conditions	9474	J	
sailing directions	7632	Jaanimets, Viktor, relief	303
scientific and technical development	21495	Jacavanco, Daniel J.:	
scientific and technical personalities	2884	antenna pattern distortion due to plasma layer	9971
trade in cotton textiles, agreement	7780	mutual coherence and array theorem	9972
Israeli Institute of Technology, activities	2696, 7341	plasma produced antenna pattern distortion	17008
		Jack, John R., resistance-heated hydrogen thrusters	11408
		Jack pine, see Pine.	
		Jackson, Donald C., reduced set point temperature in exercising dog	11785
		Jackson, George H., log diagramming guide for western softwoods	8633
		Jackson, R. A., designs for rubble-mound breakwater repair, Kahului Harbor	8520



# INDEX 1964

Entry	Entry
Jackson, Miss., occupational wage survey	11282
Jackson County, Fla., vegetable processing plant, feasibility	5924
Jackson County, Minn., geology and ground-water resources	18146
Jackson County, Miss., soil survey report	15093
Jacksonville, Ark., population, special census	177
Jacksonville, Fla., occupational wage survey	9465
Jacobs, Haskell C., serving people in need	10497
Jacobs, James M.: fluxes and their use in soldering aluminum	8070
heavy water production, annotated bibliography of selected literature	17060
reprocessing of irradiated fission reactor fuel and breeding materials	19245
Jacobson, Murray, explosibility of metal powders	18698
Jaeger, M. J.: effects of compressibility of alveolar gas on breathing	1745
measurement of airway resistance with volume displacement body plethysmograph	17010
Jaffee, Sidney A., statistical structure of revised CPI	20447
JAG Journal	3626
Jaggi, R. K., theoretical model for sunspot coolness, errata	3009
Jalpur, India, cosmic rays conference, USSR report	21592
Jamaica, N.Y., aircraft accident	13786
Jamaica: economic, technical and related assistance, agreement	3152
trade in cotton textiles, agreement	13471
Jambell culture of south coastal Ecuador	18820
James, Thomas G., electron irradiation effect on Echo II laminate	21765
Jan Mayen, gazeteer, official standard names	18097
Janow, Seymour J., testimony, hearing	2245
Janssen, E., burnout conditions for single rod in annular geometry	5960
Japan: agriculture experience, applicability	5250
atomic energy, cooperation for civil uses, agreement	11642
Communist Party, Central Committee reply to Apr. 18, 1964 letter of Central Committee of Communist Party of Soviet Union	20421
consular convention with U.S.	18966
double taxation, convention, protocol, ratification, report	15615
economic cooperation in providing assistance to Ryukyu Islands, agreement	16880
electronic industries	21078
gas appliances, household and commercial, U.S. market	145
Infrared spectroscopy, translations	16034
Japanese Association for Radiation Research on Polymers, reports	11853, 13689-690
machine translation, trends	9093
mutual defense assistance, cash contribution, arrangement, agreement	18974
National Democratization Movement Liaison Council, activities	16070
Japan—Continued north Pacific fur seals, protocol amending interim convention of Feb. 9, 1957	13469
photographic products industry, development, 1962	6001
plastic baby carriers, determination of no injury to U.S. industry	20849
portland cement, white, determination of no injury to U.S. industry	15134
research on shellfisheries and seaweeds	10555
sailing directions, change	18843
science and technology, bibliography	1796
scientific police research on counterfeiting and forgery	9064
socialists congress, translations	8988
southern, sailing directions, change	13309
titanium dioxide, determination of no injury or likelihood thereof to U.S. industry	11656
trade in manufactured products, 1961-62	14392-394
trends and developments in economy affecting market for U.S. farm products, 1950-62	14174
United States Army area handbook	17048
United States 5th Air Force, excessive stocks at selected bases, GAO report	6766
United States fruit markets, factors affecting	18042
Japanese encephalitis, <i>see</i> Encephalitis	
Japanese flowering cherry blossoms, general information	5571
Japanese language: automatic recognition of characters, linguistic problems, USSR study	16147
mathematical text, statistical study	16090
Japanese newsmen interview Ch'en I. Jarbridge quadrangle, Nev.-Idaho, geology	1313
Jarosz, Wladyslawa P., relief	4775, 2029, 6147, 6416
Jarvis, N. L., surface activity of fluorinated organic compounds at organic-liquid/air interfaces	5601
Jarvis, Norman D.: caviar and other fish roe products	19728
delicatessen fish products	2339
spiced and pickled seafoods	10566
Jastrow, Robert, why land on the moon?	11426
Java, sailing directions	18841
Javits, Jacob K., testimony, hearings	14156
Jaworowski, T. R., control augmentation critical experiments	10026
JCS pub. series	4882-83, 6875-76, 8845
Jedlicka, James R., shape of magnetically rotated electric arc column in annular gap	21756
Jeffers, Warren A., relief	6438, 8213
Jefferson City quadrangle, Mont., geology and mineral deposits	4793
Jefferson County, Ill., development program, proposals for making more effective, ARA field report	11824
Jefferson County, Mont., geology and mineral deposits	4793
Jefferson National Forest, story	14334
Jenkins, Edward D., ground water in Fountain and Jimmy Camp Valleys, El Paso County, Colo.	12516
Jenkins, James H., population status of larger vertebrates on AEC Savannah River plant site	8086

	Entry		Entry
Jenks Metals Export, Inc., President's E award for excellence in exporting (remarks).....	19360	Jews, protocols of Elders of Zion, fabricated historical document.....	17882
Jensen, A. O., vapor thermionic converters for nuclear application.....	14786	Jezewski, D. J., guidance equations for quasi-optimum space maneuvers.....	18736
Jensen, Fred S., geology of Fort Peck area.....	8767	Jigs (mining):	
Jensen, Malcolm W., examination of farm milk tanks.....	14933	Baum jig performance in treating Rocky Mountain coals.....	2992
Jersey cattle, <i>see</i> Cattle.		Jimenez, Lilia P., relief.....	8265, 17168, 21220
Jersey City, N.J., occupational wage survey.....	13066	Jimmy Camp Valley, ground water resources of area.....	12516
Jet airplanes, <i>see</i> Airplanes.		Justin, James E., project fog drops.....	14785
Jet engines, <i>see</i> Engines (aircraft).		Jo Daviess County, Ill., loading and transportation at zinc-lead mines, Engle-Picher Co.....	5477
Jet stream, <i>see</i> Winds.		Job analysis:	
Jets:		Air Force officers, group ratings of importance and obtainability of selected job characteristics.....	9985
balanced, viscous effects in ground proximity, experimental investigation.....	3174	electrical and electronic technologies, descriptions.....	10466
bypass, effects of temperature on noise, measured in Langley noise research facility.....	16695	simulated, use in identification of job requirements.....	17002
cold, discharging from exhaust nozzles designed for VTOL downwash suppression, dynamic pressure and thrust characteristics.....	11397	workers, worker and supervisor agreement concerning job descriptions.....	15232
comparisons of experimental free-jet boundaries with theoretical results obtained with method of characteristics.....	14865	Job changing and manpower training.....	13027
constricted-arc supersonic jet, evaluation.....	7506	Job Corps:	
effects at supersonic speeds on base and afterbody pressures of missile model having single and multiple sets.....	1467	establish—	
ground proximity viscous flow effects.....	1636	compilation of materials relevant to bill.....	15610
highly underexpanded free jets impinging upon parallel flat surface.....	14864	print as Senate document, report.....	15684
hot-turbulent-gas, ignition of coal dust-methane-air mixtures.....	7447	hearings.....	10306, 12126, 14152
impinging water, effect of ambient air velocity on atomization.....	7509	law.....	17311
Liquid, breakup—		message from the President.....	8246
shock waves and applications to resonant combustion.....	18754	reports.....	14120, 15482, 15523
transverse flow of gas.....	18755	potential participants, disadvantaged girls 16-21 years old.....	16926
pluming interference by computer simulation of measured flight motions of 2 RAM A 4th stages, analysis.....	3016	Job descriptions, <i>see</i> Job analysis.	
pulse, high-intensity, measuring pressure by tensometer method, USSR study.....	9194	Job horizons for college women in 1960's.....	15175
pulsed water jet, use for destruction of rocks, results.....	8993	Job performance, <i>see</i> Work.	
turbulent, attachment distance as function of adjacent wall offset and angle.....	5628	Job seekers, <i>see</i> Unemployed.	
two-dimensional, viscous mixing with particular reference to jets in ground proximity.....	13496	Jobs, <i>see</i> Employment—Occupations—Training—Women.	
unbalanced, viscous and forward speed effects in ground proximity.....	3173	Joe Wheeler finds job and learns about social security.....	13452
Jeung Sing, <i>see</i> Sing, Jeung.		Joel, Mai L., plotting circles of constant overpressure around targeted points.....	21786
Jewel Cave National Monument, general information.....	16768	Johler, J. Ralph, mode sum for LF, VLF, ELF terrestrial radio wave fields.....	20639
Jewel Cave SW quadrangle, S. Dak., geology.....	2411	John A. Blatnik Lock, designate, report.....	8346
Jewell, W. O., simulated meteor reentry.....	11400	John Elliott Rankin Memorial Veterans Hospital, designate, reports.....	10275, 15543
Jewelry:		John F. Kennedy Center for Performing Arts:	
costume, U.S. market in West Germany.....	144	appropriations, 1964, supplemental, proposal.....	6213
jewelers, jewelry repairmen, employment outlook.....	9437	designate—	
Jewett, Arno, improving English skills of culturally different youth.....	2274	hearings.....	4506
		law.....	6171
		reports.....	2076, 2086, 2219, 4459
		laws, compilation.....	12153
		John Fitzgerald Kennedy Library, memorialization of John F. Kennedy (address).....	11534
		John Martin Reservoir project:	
		modification, to provide permanent pool for recreation, fish, and wildlife purposes—	
		hearing.....	21211
		report.....	19471
		John Muir National Historic Site:	
		establish—	
		law.....	19389
		reports.....	6299, 17781

# INDEX 1964

Entry	Entry
John N. Cobb (fishing vessel): pelagic trawl development, progress report 4730	Johnson, Robert C., fibrous silicon nitride synthesis and prop- erties 14749
shrimp explorations off Vancouver Island, Oct.-Nov. 1962 19723	Johnson, Robert E., jr., review of mineral-fuel industries 1445
Johnson, A. I.: bibliography on laboratory and field methods in ground-water hy- drology 12529	Johnson, Stuart H., jr., school pray- ers, Bible reading, etc., pro- posed amendments to Constitu- tion 10328
specific yield, column drainage and centrifuge moisture content 819	Johnson, Virginia A., electrets, bibli- ography 7663
Johnson, C. Curtis, rutile traveling wave maser 20613	Johnson, William D., Jr., geology of Winnett-Mosby area, petro- leum, Garfield, Rosebud, and Fergus Counties, Mont. 8756
Johnson, Clive E., consumer purchases of citrus fruit, juices, drinks, and other products 3364	Johnston, Helen L., major health problems 5655
Johnson, E. W.: ornamental shrubs for southern Great Plains 24	Johnston, Kenneth H.: evaluation by filter methods of quality of waters injected in waterfloods 11332
ornamental woody vines for south- ern Great Plains 20913	in situ combustion project and 3 waterflood projects in Allen, Anderson, and Wilson Coun- ties, Kans., 1964 20480
Johnson, Floyd A., developing site index estimating system from stem analysis data 8685	Johnston, Paul M., geology and ground-water resources, Wash- ington, D.C. and vicinity 12527
Johnson, George V., insects and re- lated pests of house plants, how to control them 20920	Johnston, Robert L., relief 15649, 17219
Johnson, H. Thayne, electrical and electronic properties of materi- als information retrieval program 4224	Johnstown, Pa., area redevelopment manpower report 17933
Johnson, Harold K., nomination, hearing 19592	Johnstown Flood National Memorial: establish— law 17405
Johnson, Harry, testimony, hearings Johnson, Howard B., hot water treat- ments, etc., effect on bacterial soft rot in bell peppers 11735	reports 2034, 17783
Johnson, Hugh A., rural residential recreation subdivisions 15835	Joint Chiefs of Staff: Army Chief of Staff, nomination of Harold K. Johnson, hearing 19592
Johnson, J. E., nuclear submarine at- mospheres, hydrocarbon ana- lyzer 13345	Assistant to Chairman, nomination of Andrew J. Goodpaster, hearing 6496
Johnson, J. Harlan: Eocene geology from Ishigaki- shima, Ryukyu-retto 21353	JCS pub. series 4882-83, 6875-76, 8845
fossil and recent calcareous algae from Guam 10640	Joint committees, see names of com- mittee.
Johnson, Joseph L., infrared analysis of gases produced during molten salt electrolysis of metals 14758	Joint financial management improve- ment program, 15 years of progress 4752
Johnson, Joseph L., jr., low-subsonic flight characteristics of model of supersonic-airplane configura- tion with parawing as land- ing aid 1462	Joint Military Packaging Training Center, course outlines 6545-46
Johnson, Lillian P., relief 6383	Joint Publications Research Service: handbook, North Korean Com- munist terms, standard transla- tions 18540
Johnson, Louis F., jr., maximum pressure-volume relationships of human respiratory system 13648	JPRS series 884-1353, 2468-2937, 4884-5414, 6877- 7349, 8846-9372, 10719-11242, 12580-13023, 14408-659, 15096- 16566, 18192-605, 19833-20421, 21380-652.
Johnson, Lyndon B., remarks, Nov. 14, 1963 1544	publication notices— Communist China, economic ma- terials, serial reports, repack- aging 12578
see also President of United States.	conferences in Soviet bloc 1354
Johnson, Marion M., record of 1961 inaugural committee, prelimi- nary inventory 20635	epidemic reports from the world press 1355
Johnson, Neil W., planning farm for profit and stability 4199	Indonesian press survey, discon- tinuance 12579
Johnson, Nicholas: remarks— May 23, 1964 13097	scientific abstract series 19831
June 24, 1964 14723	publications, current, catalog 883, 10718
July 27, 1964 14724	Joint Senate-House Republican Lead- ership, record of press confer- ence statements 2136, 19535
Sept. 16, 1964 18655	Joints: bonded, adhesives for use in de- sign, determination of mechan- ical properties 2374
Sept. 17, 1964 20457	concrete, large blocks, tests, errata sheet 6601
Oct. 2, 1964 20458	construction— horizontal, in concrete, methods of preparing, errata sheet 6601
Oct. 21, 1964 20460	large blocks, tests, errata sheet 6601
Johnson, Oscar V., relief 15464	
Johnson, Paul W., producing alumina from clay, evaluation of nitric acid process 11337	
Johnson, Richard I., recent mollusca of Augustus Addison Gould, etc 14962	

# JANUARY-DECEMBER

	Entry
Joints—Continued	
nail-glued of plywood to solid wood, performance	18056
performance with laminated Douglas fir bolts	8674
welded, in tubing, sleeve and cutter simplify disconnecting	13170
Joints (universal):	
lightweight joint transmits torque and thrust	7484
Joists, concrete, 2-way floor and roof construction forms, recommendation of trade	5347
Jom, Lee Suey, <i>see</i> Lee Suey Jom.	
Jonathan, N., planetary physics, chemiluminescence from atomic oxygen-nitric oxide reaction under upper atmospheric conditions	14780
Jones, Calvin M., Tabanidae (Diptera) of Florida	16973
Jones, Charles D., record check studies of population coverage	10067
Jones, David L.:	
cretaceous stratigraphy of McCarthy A-4 quadrangle, southern Alaska	18110
upper Cretaceous (Campanian and Maestrichtian), ammonites from southern Alaska	6806
Jones, J. R., geology, etc., Camp Ripley Military Reservation	4813
Jones, LeRoy, germination of repellent-treated southern pine seed before and after storage	8668
Jones, Peter T., speech, Oct. 22, 1964	21094
Jones, R. N., extrapolating 1 ke values of secondary capacitance standards to higher frequencies	1498
Jones, Ralph J., selected measurement methods for plutonium and uranium in nuclear fuel cycle	4303
Jones, Robert A., heat transfer and pressure investigation of fin-plate interference model	16679
Jones, Rudard A., household storage study	4697
Jones, W. Webster, economics of milk marketing in Alaska	19087
Jones, Wm. Pritchard, radiative heat transfer between planar surfaces with filleted junctures	13248
Jones act, <i>see</i> Merchant marine.	
Jong Wan Lee, <i>see</i> Lee, Jong Wan.	
Jordan, Dan H., Hart County, Ga., soil survey	3140
Jordan, Howard V., sulfur as plant nutrient in southern U.S.	5862
Jordan, Paul R., chemical quality of surface waters and sedimentation in the Saline River basin, Kans	4810
Jordan:	
agricultural commodities, agreement	11626
economy, basic data	21080
fact sheet	1602
foreign trade regulations	21089
Jordan River, just solution of problem should be found, USSR article	18281
Jorgensen, Leland H., total enthalpy of 1-dimensional nozzle flow with various gases	7549
Joshua Tree National Monument, general information	9657
Journals:	
American trade union, list	16567
civil service	3327
current acquisitions of L.C.	3956
executive proceedings of Senate, 88th Cong., 1st sess.	10349
Index	14022
House of Representatives, 88th Cong., 1st sess.	8239

	Entry
Journals—Continued	
indexed in Index medicus, list—	
Jan. 1963	7595
Jan. 1964	7596
Journal of engineering physics (USSR periodical), translations	2689, 7194, 2921, 5029, 5320, 5327, 8979.
Journal of general biology (USSR periodical), translations	21596
Journal of research, National Bureau of Standards	3628-31, 13269-272
National Cancer Institute	3627
Ships Bureau	3290
Supreme Court	4070
Journey to work, commutation streams and social and economic characteristics of commuters in standard metropolitan statistical areas	1826
Journey without adventure and fantasy, Communist China	14451
Joyce, Floyd E., sulfatization of manganese minerals and selected gangue materials	20498
JPRS, <i>see</i> Joint Publications Research Service.	
Juab County, Utah:	
geology and mineral deposits	14341
geology of Eureka quadrangle	8755
geology of Tintic Junction quadrangle	6797
Judge Advocate General, Air Force:	
digest of opinions	2253, 3420
report 1963	8461
Judge Advocate General, Army:	
digest of opinions	2253, 3420
legal service, pamphlets	98-101, 1761, 4282-83, 5945-46, 8027-32, 10002-4, 11839-841, 13671-674, 17039, 19205-206, 20992-993.
report 1963	8461
Judge Advocate General, Navy:	
digest of opinions	2253, 3420
JAG Journal	3626
report, 1963	8461
Judge Advocates General of Armed Forces:	
boards of review, court martial reports, holdings and decisions	10445
digest of opinions	2253, 3420
Judge Francis Carr Powerhouse:	
naming—	
law	17413
reports	10220, 17750
Judges:	
circuit and district, retired, clarify status, law	256
circuit, nomination of George C. Edwards, Jr., hearings	2243
District of Columbia, retirement act, amend—	
law	21136
report	17786
district, Ohio, make permanent for northern district, report	17736
retired, court of appeals and court of general sessions of D.C., increase retirement salaries, report	15572
Supreme Court Justices' widows, increase annuities, reports	15507, 17540
Judgments, <i>see</i> Claims—also special subjects—also names of courts, etc., rendering judgments.	
Judicial Conference of United States: proceedings of annual meeting, 1963—	
departmental edition	1672
document edition	1995
proceedings, reports	9904, 13925



# INDEX 1964

	Entry
Judicial decisions construing certain provisions of Immigration and nationality act.....	2115
Judicial procedure, <i>see</i> Civil procedure—Criminal procedure.	
Judicial Procedure, International Rules Commission, <i>see</i> International Rules of Judicial Procedure Commission.	
Judiciary, <i>see</i> Courts of United States.	
Judiciary Committee, House:	
calendar.....	3653
committee prints.....	4503, 15595
copyright law revision, preliminary draft, and discussions and comments.....	17660
District of Columbia Code, 1961 edition, supp.....	8389
hearings.....	4502, 10327, 14010, 15564, 17657-659, 19515-517, 21209
investigations and studies—	
authorization, report.....	17576
expenses, report.....	4471
population and immigration problems, special series.....	2115, 6366
State taxation on interstate commerce activities—	
expenses, report.....	12070
extend time for filing reports, law.....	8225
extend time for filing reports, report.....	6296
reports.....	289-324, 351, 376-377, 1998-2000, 2002-11, 2013-29, 2032-33, 2044-46, 2049, 2051-54, 2060-61, 2064, 2077-79, 2090, 4445-51, 4408, 6225-26, 6228-67, 6269-70, 6284-85, 6296, 6305, 6329, 8262-84, 8301-2, 10196-199, 10201-204, 10230-231, 10240, 10255, 12031-44, 12062, 13928, 15422-426, 15429-449, 15451-457, 15459-479, 15484-485, 15489, 15501, 15507-512, 15526, 15553, 17477-506, 17515-518, 21170-185.
travel authorization, reports.....	2064, 8340
Judiciary Committee, Senate:	
calendar.....	3671
committee prints.....	541, 6518-19, 10426, 12274-276, 17882-883, 21241
hearings.....	537-540, 2242-45, 6514-17, 10427-428, 12277, 14147-150, 15811.
investigations and studies—	
administrative practice and procedures in Federal agencies—	
authorization, report.....	4556
expenses, report.....	17807
report.....	6479
antitrust and monopoly laws, administration—	
authorization, report.....	6449
expenses, report.....	17808
codification of statutes of U.S., expenses, reports.....	4561, 17814
constitutional amendments—	
authorization, report.....	6450
expenses, report.....	17809
constitutional rights—	
authorization, report.....	6451
expenses, report.....	17810
Federal charters, holidays, and celebrations, authorization, report.....	6452
Federal judicial system, authorization, report.....	6453
immigration and naturalization—	
authorization, reports.....	4557, 6483
expenses, report.....	17811

	Entry
Judiciary Committee, Senate—Con. investigations and studies—con. internal security laws, etc., administration, expenses, reports.....	4558, 17813
juvenile delinquency—	
authorization, report.....	4559
expenses, report.....	17815
national penitentiaries, authorization, report.....	4560
Patent Office administration and patent, etc., statutes—	
authorization, report.....	6454
report.....	10402
refugees and escapees—	
authorization, report.....	6455
expenses, report.....	17812
trading with the enemy act, etc., extension, report.....	4562
reports.....	425-453, 505-509, 2138-61, 2163-82, 2186-87, 2189, 2207-8, 2221, 4522, 4528, 4531-32, 6380-6440, 6475-79, 6483, 8408-10, 10368-393, 10398-402, 12174-190, 12192-204, 12208-210, 14032-47, 14079-81, 14083-86, 14099, 15616-639, 15642-656, 15660-670, 15672-675, 15679, 15694, 15758, 15760, 15764, 15769, 17672-687, 17690-703, 17705, 17727, 17730, 17733-744, 17756-757, 17798, 17836, 17857-858, 19637-555, 19557-562, 19572, 19585, 21220-225, 21229-231.
Revision and Codification Subcommittee, résumé of activities.....	8410
Judson, Lewis V., weights and measures standards of United States, brief history.....	1492
Judy, Chester J., contribution of education to rated effectiveness of weather officers.....	20970
Juices, <i>see</i> Fruit juices.	
Julia Pfeiffer Burns State Park: mineral rights in land, convey to California—	
law.....	1945
report.....	2190
Jullien, John M., labor-delivery unit in general hospital.....	11560
June, Fred C., age and size composition of menhaden catch along Atlantic Coast of United States, 1958.....	18029
Juneau, Alaska, principal electric facilities, map.....	680
Jung, Bay Kow, relief.....	437, 1870
Jung, Hai Yung, relief.....	2023, 6139
Jung, Johnny, relief.....	2023, 6139
Junge, Charles O., Jr., factors influencing return of fall Chinook salmon ( <i>Oncorhynchus tshawytscha</i> ) to Spring Creek Hatchery.....	4742
Junghans, Caroline G., relief.....	2010
Junior College Division, establish in D.C. Teachers College, report.....	482
Junior colleges:	
State directors and coordinators of State systems, conference proceedings.....	605, 19638
2-year college series.....	4619
Jurassic period:	
marine pelecypods from central and southern Utah.....	18137
nonopaque heavy minerals in sandstone, Black Hills, Wyo. and S. Dak.....	4777
upper Jurassic mollusks from eastern Oregon and western Idaho.....	15952
<i>see also</i> Ammonites.	

# JANUARY-DECEMBER

	Entry
Jurisdiction:	
courts of U.S. in naturalization proceedings, directory	8793
diversity, of Federal courts under direct action statutes, eliminate—	
law	17298
reports	6329, 10208, 21229
Federal Power Commission, amend act—	
hearings	15804
report	17712
legislative—	
Federal enclaves, adjust, hearing, print additional copies, report	2223
Pole Mountain district of Medicine Bow National Forest, retrocede jurisdiction to Wyoming—	
law	17353
report	15536
Naval hospital, Portsmouth, Va., adjust—	
hearing	10296
law	17244
reports	10270, 14116
Supreme Court and all Federal Courts inferior thereto, defining, report	17577
see also Criminal jurisdiction—Venne.	
Juska, F. V., Bermudagrass varieties for general-purpose turf	16947
Justice Department:	
appropriations, 1964—	
hearings	515
law	1974
reports	511, 2082
appropriations, 1964, deficiency, hearings	10285
appropriations, 1965—	
hearings	8362, 15791
law	17386
reports	10245, 21193, 21233
Attorney General, reports on competition in synthetic rubber industry	5416, 18606
judgment collection practices and policies—	
hearing	15587
report	15531
judicial administration, code of Federal regulations	6654
opinions of Attorney General	3824, 5415, 7350, 20423
bound volume—	
departmental edition	14660
document edition	13919
Justice Reservoir:	
designate as R. D. Bailey Reservoir—	
hearing	21211
report	19468
Justices, see Judges.	
Juvenile courts:	
statistics, 1962	4362
treatment of delinquents, order of disposition	8145
Juvenile delinquency:	
counter-attack on delinquency	16819
double jeopardy and waiver in proceedings	10077
escape of juvenile delinquents, penalty imposed—	
law	1979
reports	507, 2045
halfway houses for delinquent youth	4359
investigation—	
authorization, reports	4559, 19585
expenses, report	17815
hearings	539

	Entry
Juvenile delinquency—Continued	
investigation—Continued	
interstate traffic in mail order firearms, report	21231
report	17836
prevention and control, extend act—	
law	15385
reports	6283, 12087
problem and implication for education (speech)	5762
public training schools serving delinquent children, directory	198
social and economic trends	6054
what houseparents should know about problems of children in their care	11921
Juvenile delinquents, treatment of offenders in court, order of disposition	8145
K	
Kaattari, George E., shock envelopes of blunt bodies at large angles of attack	3012
Kadib, Abdel-Latif, calculation procedure for sand transport by wind on natural beaches	12337
Kagarise, R. E., solvent-induced effects on infrared spectra	5587
Kahan, Alfred, optical absorption coefficient	9968
Kahl, Anne S., labor law and practice in Yugoslavia	5434
Kahului Harbor, breakwater repair, designs	8520
Kalbab Lumber Co., land sale to—	6227, 14031
Kaiser, Donald R., modern sewage treatment plants, how much do they cost?	20765
Kaiser, Henry J., Congressional Medal of National Honor bestowed, issuance of gold medal authorize, report	10254
Kalahari Desert, Bushmen, thermal and metabolic response to moderate cold exposure at night	4243
Kale, caterpillar control in South	9839
Kallspel Indians:	
disposition of funds to Lower Pend D'Oreille or Kallspel Tribe—	
law	17271
reports	12109, 15743
Kalkanis, George, transportation of bed material due to wave action	12339
Kalkaska County, Mich., redevelopment area, opportunities for economic development	15252
Kallander, J. W., NELIAC-N, tutorial report	5610A
Kallek, Shirley:	
chart book, manufacturer's shipments, inventories, and orders, 1953-63 revised	15306
manufacturers' shipments, inventories, and orders, 1947-63 revised	188
Kaloyanoff, Kaloyan D., relief	6350
Kaluzny, Czeslaw (Chester):	
relief	12194, 17485, 19378
Kam, William, geology, etc., of Mc Mullen Valley	4811
Kamchatka, earthquake zone, statistical forecasting of annual seismicity in advance	10913
Kamm, Irmin O., research on light-truck highway train	15136
Kammer, E. W., thermal shock evaluation of refractory materials as rocket nozzle inserts	13331
Kampouris, Polly A. M., relief	14037

# INDEX 1964

	Entry		Entry
Kanda Bay, and its inhabitants, USSR study	7169	Kaskaskia River : levees, engineer report—	
Kandla, India, port water supply	815	departmental edition	17945
Kane, Walter C., coordinating community study of environmental health	18896	document edition	17470
Kane County, Utah, Navajo Lake, hydrology and hydrogeology	21355	Katell, Sidney, bibliography of investment and operating costs for chemical and petroleum plants, Jan.-Dec. 1963	13109
Kanninen, P. Tolvo, wages and related benefits, pt. 2, metropolitan areas, United States and regional summaries, 1962-63	16590	Katmai National Monument, general information	5567
Kansas :		Kato, Haruo, effect of impurity levels on zircaloy-2 microstructure, mechanical properties, and corrosion rates	20510
annual survey of manufactures, 1962, standard metropolitan statistical areas, and large industrial counties, statistics	6028	Kattegat : lights and fog signals, list, changes	13312, 16781, 21817
bluestem, Flint Hills, pasture report	16881	sailing directions, change	11476
climatic summary, 1951-60, decennial census	19023	Katz, Fred H., parotid fluid corticosteroids	5901
climatological data	3329	Katz, Milton S. :	
day care program for migrant children, health needs	9717	effects of stimulus and field size on accuracy of orientation in homogeneous environment	20701
electric rate book	19691	empty visual field studies, some effects of corrective lenses, filters, and structure	18856
highways bordering Fort Leavenworth Military Reservation and U.S. Penitentiary at Leavenworth, retrocede jurisdiction to Kansas—		Katzoff, S., clarity in technical reporting	16667
law	17360	Kaufman, Alvin, geothermal power, economic evaluation	18670
reports	14110, 17522	Kaufman, J., relationship of fungicides and field spacings to Botrytis neck rot of onions grown in New York	20900
labor organizations, reporting, register	16573	Kaufman, Milton, U.S. waterborne foreign commerce, review of 1962	15328
mineral industry, minerals yearbook chapter	1412	Kaufman & Broad Building Co., relief	2014, 6404, 21104
Mississippi River and tributaries, fishery products, wholesale dealers, list	8614	Kavanagh, David A., development of miniature telemetry system	5899
municipal waste facilities, 1962 inventory	3106	Kawa, Walter, unconventional methods of hydrogenating coal	13108
municipal water facilities	18911	Kawalkiewicz, Frank S., helicopter vibration indicator	5723
precipitation data, hourly	3578	Kay, Evelyn R., computation of cost-of-living indexes in developing countries	21670
sulfur, resources and production	20475	Kayahara, Uchi, relief	17491
Kansas City, Kans., occupational wage survey	9459	Kazakh Soviet Socialist Republic : Academy of Sciences, activities	5198
Kansas City, Mo. :		higher schools for large-scale chemical industry program	16498
aircraft accident	13788	scientific achievements	8954
Northside urban renewal project, streets and facilities, excessive allocation of costs, urban renewal administration, HHFA, GAO order	19754	Uigur, Tungan, and Korean minorities	20069
occupational wage survey	9459	vanadium and alloys, prospects for production, USSR study	1227
principal electric facilities, map	675	Kazakhstan, see Kazakh Soviet Socialist Republic.	
Kantargos, George T., temperature effects on noise of bypass jets	16695	Kazan' Veterinary Institute, activities	4943
Kantor, Arthur J., tropopause definition and hourly fluctuations	19154	Kazanowski, Edward J., wholesale prices and price index, 1961	9457
Kantor, Gideon, whistler-hydromagnetic extension of magnetolonic theory	5874	Keane, Leo M., confidence levels for sample mean and standard deviation of Rayleigh process	19176
Kaolin, coarse, continuous attrition grinding	2994	Kearny County, Kans., soil survey report	7745
Kaplan, Irving, heavy water lattice project annual report	19234	Keating, Gerald M., vectorial reflectance of Explorer IX satellite material	16701
Karakum, southeastern, mammalian fauna and its change resulting from construction of Karakum Canal, USSR	2842	Keating, Kenneth B., testimony, hearings	14156
Karakum Canal, construction, changes in mammalian fauna of southeastern Karakum, USSR	2842	Keay, C. S. L., determining directivity of antenna systems	5504
Karitas, James J., damage and breakage in grocery warehouses and retail food stores	11770	Keech, C. F., ground-water conditions in proposed waterfowl refuge area near Chapman, Nebr.	15966
Karl, Max H., testimony, hearings	6526	Keefer, James F., Philippine supply and demand for agricultural products, with implications for U.S. exports	2264
Karlstrom, Thor N. V., quaternary geology of Kenai Lowland and glacial history of Cook Inlet region, Alaska	10644		
Karpathos, sailing directions	7632		
Karst, East China types	9208		
Kase, Karel A., conversion of saline water, bibliography	847		

	Entry
Keefer, William R., geology of Shotgun Butte area, Fremont County, Wyo.-----	8757
Keeton, Don C.: digital computer program for EGCR temperature and neutron transient analysis, ETNATA-----	15280
FATT, transient temperature computer program for EGCR core-----	11858
Kefauver, C. Estes, memorial services-----	6132
Kehr, August E., commercial potato production by reverse osmosis-----	16946
Kellin, B., mechanism of desalination by reverse osmosis-----	6835
Kelr, Peter M., open market policy process-----	4716
Keller, Douglas V., jr., adhesion between atomically clean surfaces-----	7547
Keller, Morton, tidal current surveys by photogrammetric methods-----	4407
Kelley, Catherine M., foreign trade regulations of Austria-----	14381
Kelley, Edward K., North High work-study program for educable mentally retarded-----	612
Kelley, Fern S., ideas, 4-H and youth development-----	6630
Kelley, Jerry L., school and unmarried mothers-----	19314
Kelley, John E., penetrometer for measuring absolute viscosity of glass-----	7438
Kellough, Kenneth L., testimony, hearings-----	6526
Kelly, Edna F., United Nations in crisis-----	6271
Kelly, Hal J.: Bovill clay, etc., deposit-----	5480
electrical dewatering of dilute clay slurries-----	16632
Kelly, Pearce C., variety stores-----	13443
Kelly, Thomas C., RAM B launch vehicle, aerodynamic characteristics, etc-----	9590
Kelsay, Laura E., list of cartographic records of General Land Office-----	7573
Kemper, Clarence A., multiphase ejectors for distillation desalination systems-----	10680
Kenaf, bibliography, 1950-62-----	6555
Kenai, Alaska, quaternary geology of lowland-----	10644
Kendall, E. G., metals and alloys for cryogenic applications, review-----	11809
Kendrick, Douglas B., blood program in World War II-----	21010
Keneshea, Thomas J., solution of reaction rate equations in atmosphere below 150 kilometers-----	55
Kenilworth Aquatic Gardens, general information-----	21806
Kenline, Paul A., air pollution and kraft pulping industry-----	15047
Kennard, Nebr., railroad accident-----	12572
Kennedy, Jacqueline B.: inaugural gown, National Museum exhibit-----	1583
office space, supplies, equipment, and franking privileges, law-----	1924
Kennedy, John F.: assassination, subpoena power for investigating Commission-----	1931
law-----	2044
report-----	16617
chronological list of references-----	1924
death, expenses incident to, appropriations, law-----	2132
eulogies, Nov. 24, 1963-----	

	Entry
Kennedy, John F.—Continued	
50-cent piece commemorating— coinage proposal-----	1992
law-----	1983
report-----	2067
5-cent memorial stamp— dedication (address)-----	13374
poster-----	11535
great power and diversity, perceptions and policies (address)-----	7769
inaugural address, Jan. 20, 1961 (poster)-----	13920
legislative program, enact (address)-----	283
memorial addresses and tributes in Congress-----	15606
print as Senate document, reports-----	4470, 4535
memorial services, print as Senate document, report-----	2198
statements and speeches, 1947-60. <i>see also</i> President of United States.	21216
Kennedy, John F., Center for Performing Arts, <i>see</i> John F. Kennedy Center for Performing Arts.	
Kennedy, John F., President's Commission on Assassination of, <i>see</i> President's Commission on Assassination of President John F. Kennedy.	
Kennedy, Joseph C. G., United States on eve of Civil War-----	10114
Kennedy, Marjorie D., confectionery sales & distribution, 1963-----	11879
Kennedy, Vance C., sediment transported by Georgia streams-----	4812
Kenneth, H. Connor, Jr., shell egg grading and inspection of egg products-----	11768
Kennewick division, <i>see</i> Yakima project.	
Kent, Donald J., relief-----	6243, 15635, 17177
Kent, James A., preparation of wood-plastic combinations-----	8066
Kentor, William E., testimony, hearings-----	8456
Kentucky: annual survey of manufactures, 1962, standard metropolitan areas and large industrial counties-----	6030
area measurement report-----	17072
black shales of New Albany formation, specific-gravity relationship to oil-yield-----	20507
Breaks Interstate Park compact, amendments-----	
law-----	19410
reports-----	15550, 17842
climatic summary, 1951-60, decennial census-----	19024
climatological data-----	3329
eastern, forest industry processing and marketing complex-----	13666
electric rate book-----	667, 14248
labor organizations, reporting, register-----	16571
medical aspects of driver limitation, program-----	20760
mineral industry, minerals year-book chapter-----	1413
Mississippi River and tributaries, fishery products, wholesale dealers, list-----	15926
municipal waste facilities, 1962 inventory-----	3103
municipal water facilities-----	18908
precipitation data, hourly-----	3578
primary wood industries of Kentucky, utilization summary and directory-----	14307
rural family spending and consumption in low-income area-----	19081



# INDEX 1964

Entry	Entry
Kentucky—Continued	Keyserling, Mary D. :
southeastern, floods of Jan.-Feb. 1957-----	addresses—
western, technical and economic feasibility of establishing hard-wood pulp and paper mill in 8-county area-----	May 25, 1964-----
17027	July 18, 1964-----
women—	nomination, hearing-----
legal status-----	Keywords index to U.S. Government technical reports (periodical)-----
workers, 1960-----	3632
Kentucky River and Valley, middle area, opportunities for economic growth-----	Khrushchev, Nikita S. :
19197	Khrushchev's Communism, Chinese comment-----
Kenya :	role in virgin lands policy, French anticommunist analysis-----
do business in, trade mission report-----	9092
gazetteer, official standard names-----	speeches and writings-----
investment guaranties, agreement, 1964-----	16520
Keppel, Francis, address, Feb. 15, 1964-----	Kibort, Bernard R., manual blind landing using closed circuit TV displays-----
6574	13226
Kerenyi, Gabriel, relief-----	Kidneys :
6260, 11988	acute renal insufficiency, USSR study-----
Edison-Maricopa area, geology and ground water-----	20107
land conveyance at Naval Ordnance Test Station, China Lake, Calif.—	autoregulation, mechanism in intact kidney-----
law-----	13734
reports-----	clinical physiology and functional diagnosis methods, USSR study-----
364, 15727	20050
Kerns, William H. :	functional condition after repeated thermal trauma, USSR study-----
minerals yearbook chapters—	14468
salt-----	impairment of excretory function in burns, use of urea for treatment, USSR study-----
water-----	18231
20513	intrarenal hemodynamic changes following acute arterial occlusion-----
20517	5997
Keroher, Grace C., glossary of stratigraphic terms-----	renal function and renal hemodynamics, acute and chronic effects of insecticide endrin-----
8771	13728
Kerosene, safe use and storage on farm-----	salmonid fishes, bacterial kidney disease-----
9942	10567
Kerr, H. W., recent research on marketing of sweetpotato flakes-----	see also Artificial kidney.
21260	Kiev, Ukrainian SSR, economic administrative region, specialized and overall development, translations-----
Kerr, James R. :	5023
mineral industry of—	Kil Ja Ahn, relief-----
Connecticut-----	15457
Vermont-----	Kilauea Volcano, 1961 eruption-----
West Virginia-----	14345
2991	Killik River, geology of region-----
Kerr Water Research Center, see Robert S. Kerr Water Research Center.	10636, 19751
Kersten, Mary H., products obtained by oxidation of anthracite with nitric acid-----	Kilpatrick, F. A., channel geometry of Piedmont streams as related to frequency of floods-----
20509	10642
Keshock, Edward G. :	21113
bubbles in nucleate boiling under normal and reduced gravity conditions-----	Kim Sook Hee, relief-----
16683	15656, 21113
comparison of absolute- and reference-system methods of measuring containment-vessel leakage rates-----	Kim, Tricia, relief-----
20573	1879, 2161
Kester, Gerald, soil survey, Holbrook-Shaw Low area, Ariz-----	Kim, Young Soon, see Young Soon Kim.
13456	Kimball, Eisle M., Interior Dept. decisions, cases relating to public lands, digest-----
Kesterke, Donald G., electrolysis of uranium dioxide to uranium metal in fluoride melts-----	4831
11340	Kimballton limestone mine, Standard Lime and Cement Co., Giles County, Va., mining methods and costs-----
Ketchens, Maisie M. L., relief-----	13107
15429, 17214, 17676	Kindergarten, Soviet Union pre-school education methods-----
Ketchikan, Alaska :	12860
consumer expenditures and income, 1960-----	Kindswater, Carl E., discharge characteristics of embankment-shaped weirs-----
1367, 5426	6813
principal electric facilities, map-----	Kinematics :
680	engine and pump inlet duct gimbal joint system in S-1C stage of Saturn V vehicle, analysis-----
Ketenjian, Yeghsa, relief-----	20568
8266	properties of certain small-scale systems-----
Kety, Seymour S., report of mission to USSR-----	11701
9703	transport of chemically reacting species in classical capillary-----
Keuka Park quadrangle, N.Y., bedrock geology-----	3025
12505	Kinetics :
Key to aviation weather forecasts-----	analysis, including attenuation of both neutrals and ions by scattering-----
11659	13645
Key to meteorological records documentation-----	equations for plasma including radiation in presence of external magnetic field, solution-----
9881-82, 13529-530, 15156-162, 16919-920, 19026.	13699
Keyes, J. Wayne, longitudinal aerodynamic characteristics of blunted cones-----	Fischer-Tropsch synthesis on iron catalysts-----
7546	13103
	ion dissociation processes occurring in drift tube of time-of-flight mass spectrometer-----
	52

# JANUARY-DECEMBER

	Entry		Entry
Kinetics—Continued		Klowa Creek, fluvial sediment in basin	21364
kinetic-energy absorber employs frictional force between mating cylinders	13188	Kiplinger, D. C., retail florist	16857
reaction, gas solid, determining with sensitive volumetric apparatus	7439	Kiras, Vera M.: distribute land sale proceeds to—law reports	17312 15428, 17710
reactor kinetics and control, symposium	13714	Kirby, Richard N., basic data on economy of Hong Kong	15984
triiodide/iodide reaction on platinum electrode in neutral solution	7653	Kirby, Robert H., force-test investigation of model of modified VZ-2 aircraft	16699
weakly coupled gases theory—see also Chemical reactions.	11861	Kirk, Dudley, population of Western Europe, presentation	2115
Kinetocardiography, accelerometric precordial ballistocardiogram in hypertension	14913	Kirk, Jerry V., aerodynamic characteristics of full-scale fan-in-wing model including results in ground effect with nose-fan pitch control	18737
King, Basilio, and family, relief	10393, 21114	Kirk, Samuel A., organization and implementation of programs for handicapped children and youth, 1964	17920
King, C. D., jr., biphenyl liquid heat transfer, etc., studies	10032	Kirtland Air Force Base, electronic data processing equipment, excessive cost of leasing compared with buying, GAO report	4758
King, Margaret L.: educational data—Austria, Federal Republic	578	Kish, John, relief	6254, 10382, 11990
Finland, Republic of	580	Kister, L. R., sedimentation and chemical quality of water in Salt Creek basin, Nebr.	822
Iceland, Republic of	12322	Kitchen equipment, maintenance of galley equipment at naval shore activities	7868
Ireland, Northern	584	Kitchens, Beltsville energy-saving design	5830
Netherlands, Kingdom of	585	Kites, moored, Federal aviation regulations	6610
Spain	586	Kits: brake lining, improper disposal by Army Department, GAO review	18089
Switzerland	19628	pararescue medical kit—see also Armament kits—Repair kits.	9979
King, Philip B., geology of Great Smoky Mountains	8764	Kitty Hawk (aircraft carrier): crew members, improper or unnecessary payments of pay, travel, and other allowances by Department of Navy, GAO report	10602
King crabs, movements of king crabs tagged and released in Shumagin Islands area 1957-62	6728	Kizel, Russian SFSR, coal basin water, role of microbiological factors in increasing corrosiveness	2580
King salmon, see Salmon.		Klahr, Carl N., heterogeneous reactor calculation methods	19237
Kings Canyon National Park: general information	14979	Klain, G. J., metabolic studies of amino acid imbalance in cold exposed rats	4249
map	18833	Klamath National Wildlife Refuge, see Lower Klamath National Wildlife Refuge—Upper Klamath National Wildlife Refuge.	
Kings Mountain, N.C., Foote Mineral Co., continuous flotation of beryl from spodumene mill tailing	14748	Klamath project: cancel charges against non-Indian-owned lands—law reports	17315 372, 15776
Kingston, R.I., research and field laboratory for water pollution control	11573	Klapthor, Margaret B., gown of Mrs. John F. Kennedy as displayed in National Museum	1583
Kingston quadrangle, R.I., bedrock geology	18105	Klaus, David J., step size and error rate in programmed instruction	20704
Kinnen, Edwin: thoracic cage impedance measurements—cancellation of respiration effects on transthoracic impedance—determination of cardiac output—dynamic responses of pneumograph—impedance product systems—tissue resistivity, etc.	5906 9988, 15238 5907 76 9987	Klebsiella pneumoniae: challenge, effect of acclimatization to 2° C on host susceptibility—space cabin environments effects on resistance of mice to infection	7981 11807
Kinney, Edward C., acid mine pollution affecting fish and wildlife	17998	Klee, Howard W.: addresses—Jan. 29, 1964—Mar. 5, 1964	5561 7594
Kinney, Jo Ann S.: factors affecting induced color—night vision sensitivity during prolonged restriction from sunlight	5464 5465		
Kinnison, Hallard B., effects of hydraulic and geologic factors on streamflow of Yakima River basin	4807		
Kino, Eusebio F.: statue—accepting, reports—place temporarily in rotunda of Capitol and hold ceremonies, reports—proceedings at unveiling, authorize printing, reports.	17554, 17802 17553, 17801 17560, 17803		
Kinsey, B. B., report on visits to some European laboratories	1779		
Kinzua Dam: Seneca Indian relocation, etc.—hearings—law—reports	6359, 8448 17392 6275, 8418, 17596		

# INDEX 1964

	Entry		Entry
Kleespies, Ernest K.:		Knox, J. B., Project Pre-Buggy, base	
titanium nitride preparation.....	13123	surge analysis.....	4298
transfer of selected metals in titanium electrorefining.....	11341	Knoxville, Tenn., real property acquisition practices and adequacy of compensation, hearings.....	15602
Klein, Jack E., drive-in dairies in Central California, development, organization, and operation.....	1707	Knuzyants, I. L., biographic information.....	19876
Klein, Lawrence R., International Labor Conference of 1963.....	5442	Koberg, Gordon E., long wave and reflected solar radiation from atmosphere and water surface, etc.....	8763
Klement, Alfred W., Jr., terrestrial and freshwater radioecology.....	125, 15285	Kobett, D. R., panel flutter research.....	1479, 14788
Klemic, Harry, geology of Belmont and Calamine quadrangles, Wis.....	18103	Kobuk River and Valley, central, northwestern Alaska, surficial geology.....	18111
Klepfer, H. H., USAEC symposium on zirconium development, 1962.....	5961, 10028	Koch, George S., Jr.:	
Klett, Robert J., fission product separation by solvent extraction.....	5983	estimating metal content, etc., of ore body from diamond-drill-hole data.....	9502
Klich, George F., cooling 12.5° semi-vertex angle cone by ejection of hydrogen and helium from its apex at Mach 7.....	20604	statistical interpretation of sample assay data from MI Vida uranium mine, Big Indian district, San Juan County, Utah.....	21717
Klickman, A. E.:		Kogon, Maurice, market for U.S. products in Hong Kong.....	15982
fixed blankets for fast reactors.....	10025	Kohl, Douglas A., 500-ke./sec. series studies in severe storms.....	11703
mobile blankets for fast reactors.....	19230	Kohl, Jesse W., research reported by Naval Medical Research Laboratory.....	11311, 14728
Killer, E. P.:		Kolkhozes, <i>see</i> Collectives.	
fatigue crack effect on heat-treated 4340 steel.....	5588	Kollar, K. L., water service-pipe requirements by water utilities, 1950-60.....	19280
fatigue crack strength of heat-treated 4340 steel.....	13335	Kolodrubetz, Walter W., labor mobility and private pension plans.....	16609
Kline, Marvin S., relief.....	15474, 17699	Komack, Roy L., magnetotelluric micropulsations at widely separated stations.....	7962
Klingman, C. L., apparatus for detecting helium leaks.....	5495	Kommunist (periodical):	
Kljajin, Miladin, relief.....	10376, 15441	translations.....	1078, 1224, 2682, 4968, 5289, 7038, 8902, 9105, 9356, 11024, 12591, 13000, 16151, 16332, 18307, 19866, 20143, 21439, 21620
Klopp, William D., effects of purity and structure on recrystallization, grain growth, ductility, tensile, and creep properties of arc-melted tungsten.....	21776	Komons, Nick A., Air Force and nuclear physics, history of program.....	67
Klosky, Simon, Index of gasification patents, Belgian, French, German, Italian, and Swedish.....	18660	Konkle, Ward W., agricultural science review.....	547, 3224
Klotz, Herbert W.:		Konopka, Gisela, what houseparents should know.....	11921
addresses, etc.....		Konyen, Wilhelm, and family, relief.....	15665
Oct. 1, 1964.....	19357	Kootenai Indians:	
Oct. 5, 1964.....	21095	judgment funds, disposition—	
Oct. 8, 1964.....	19366	law.....	1960
Oct. 19, 1964.....	19356	report.....	2030
Klyce, Donald F.:		Kootenai River, Libby Dam, construction authorized.....	2297
mineral industry—		Koppers Company, Inc., hydrate process for saline water conversion, experimental and engineering studies.....	10674
Indiana.....	1411	Korea:	
Michigan.....	1415	North—	
Knanishu, J., high temperature non-reflective erosion resistant aluminum finish.....	18869	central yearbook, 1963, information from.....	18489
Kneppel, D. S., beryllium corrosion report.....	5972	Communist Party's agricultural policy.....	11060
Kniffin, Fred W., retail credit and collections, bibliography.....	20786	economic reports.....	956, 1142, 1190, 2604, 2625, 2698, 2795, 4889, 5078, 5122, 5340, 6937, 6991, 7189, 8900, 8920, 9003, 9103, 9276, 9289, 10930, 11060, 12824, 12983, 15998, 18226, 18400, 18601, 20152, 20262.
Knight, S. J.:		factional rivalry, history.....	8929
forecasting trafficability of soils subjected to freezing and thawing.....	14211	labor conditions.....	9473
trafficability tests with Marsh screw amphibian on coarse and fine grained soils.....	6600		
Knippling, E. F., potential role of sterility method for insect population control.....	20897		
Kniseley, Ralph M., dynamic clinical studies with radiolotopes.....	15286		
Knit goods, <i>see</i> Clothing—Textiles—also names of clothing.....			
Knoebel, Robert M., plan for teaching teachers of data processing.....	8490		
Knowles, Doyle B.:			
geology and ground-water resources of Montgomery County, Ala.....	6812		
ground water conditions in Green Bay area, Wis., 1950-60.....	6819		
water resources of Green Bay area, Wis.....	4802		

	Entry		Entry
Korea—Continued		Krebill, R. G., blister rust found on	
North—Continued		limber pine in northern Wa-	
political and sociological infor-		satch Mountains.....	16935
mation.....	942	Krebs, Richard P., analysis and de-	
1141, 1301, 2471, 2547, 2645,		sign procedures for flat, direct-	
2671, 2680, 2695, 5054, 7145,		condensing, central finned-tube	
8949, 9049, 9150, 9227, 11153,		radiator.....	20601
12975, 15997, 16455, 18401,		Kreiss, Edward E., relief.....	15467
18598, 20261.		Kreitzberg, Carl W., occlusions struc-	
prefabricated housing experi-		ture determination.....	7965
ences.....	5122	Kreuger, Paul H., writings of Ameri-	
standard translations of Commu-		can authors, I, USAFI study	
nist terms, JPRS handbook.....	18540	guide.....	21248
yearbook, 1962.....	885	Krickich, Joseph:	
Republic.....		mineral industry of—	
administrative areas, demo-		Maine.....	20489
graphic, economic and geo-		Ohio.....	2986
graphic statistics.....	20098	Krislov, Joseph, employee-benefit	
agricultural commodities, agree-		plans in 1962.....	9774
ment.....	11636, 16878	Kroger Co., accident.....	4878
consular convention with U.S.....	5700	Krueger, Gladys M., phenylketonuria,	
foreign trade regulations.....	10693	bibliography, 1963.....	4361
investment factors.....	14382	Krueger, Kenneth W., compounds	
labor conditions.....	9476	leached from western redcedar	
petroleum, agreement.....	18977	shingle tow found toxic to	
United Nations operations, logis-		Douglas-fir seedlings.....	8656
tical support, agreement with		Krugman, Stanley L., ten-year per-	
Australia, etc.....	11627	formance of California planting	
United States 5th Air Force, exces-		of progenies of Pinus	
sive stocks at selected bases,		radiata from Australia.....	12466
GAO report.....	6766	Krupp-Kenn process, treating lean	
Korean War, 1950-53, USAF airborne		iron ores of Mesabi Range,	
operations.....	4264	feasibility.....	13665
see also Pensions.		Kruzof Island, aerial photographs,	
Koreans, minorities in Soviet Central		recognition criteria of rock	
Asia and Kazakhstan.....	20069	types.....	6795
Kormanik, Paul P., comparison of lob-		Krypton isotopes, Kr-85, development	
lolly, white, Virginia, and		as universal tracer.....	19235
shortleaf pine in Virginia		Ku, Marshall, relief.....	19538
Piedmont.....	2381	Kube, Wayne K., technology and use	
Kormilev, Nicholas A., Aradidae in		of lignite.....	20479
National Museum, subfamily		Kubin, Robert F., thermodynamic	
Mezirlinae (Hemiptera).....	7603	properties and Mollier chart	
Kornegay, B. H., transport of radio-		for hydrogen from 300° K to	
nuclides in fresh water sys-		20,000° K.....	11359
tems, report of working meet-		Kudirka, Joseph M., flight evaluation	
ing.....	129	of UH-1B helicopter equipped	
Koror Magnetic Observatory, magne-		with XM-5 armament kit.....	13621
tograms and hourly values,		Kuenzi, Edward W., mechanical prop-	
erratum.....	10116	erties of adhesives for use in	
Koski, Augustus A., Hungarian, basic		design of bonded joints.....	2374
course.....	13464	Kuhns, Perry, microwave interfer-	
Kostantoyannis, John G., relief.....	2028,	ometer measurements of elec-	
6169, 6418		tron-ion recombination in	
Kostides, Kalliope, relief.....	10373	nitrogen, air, and argon,	
Kouyoumjlam, Mardiras, and wife, re-		errata.....	1452
lief.....	12202	Kuklis, A., mineral industry of	
Kovtun, A. I., Sevastopol' diary.....	1279	Kansas.....	1412
Kowalczyk, Wladyslawa, relief.....	6386	Kurath, Gertrude P., Iroquois music	
Kraft, Ivor, when teenagers take care		and dance, ceremonial arts of 2	
of children, guide for baby		Seneca longhouses.....	9992
sitters.....	17118	Kurdistani, Democratic Party of Kur-	
Kraft paper, see Paper.		distan, 6th congress, general	
Kraftite Co., clay mining, processing,		information.....	20121
and utilization, methods and		Kurle Islands:	
practices.....	1404	earthquake zone, statistical fore-	
Kramer, David, plankton grid studies		casting of annual seismicity in	
off Baja California.....	4740	advance.....	10913
Kramer, Henry H., research in activa-		seismicity and deep structure of	
tion analysis.....	10034	southern part of arc, USSR	
Kramer, James P., generic revision of		study.....	6878
leafhopper subfamily Neoco-		Kurmas, Kazimierz, relief.....	240
elidiinae (Homoptera: Cicad-		Kurmas, Stanislaw, see Kurmas,	
ellidae).....	7604	Kazimierz.	
Krammes, J. S., first aid for burned		Kurmas, Zdzislaw, relief.....	240
watersheds.....	8665	Kuryl, Stanislaw, relief.....	295, 6162, 6409
Krascella, N. L., tables of composi-		Kurzahls, Peter R., spin dynamics of	
tion, opacity, etc., of hydrogen.....	5502	manned space stations.....	11419
Krause, Helmut G. L., astrophysics.....	5528	Kushman, L. J.,	
Krawec, Roman, instrument for elec-		sodium o-phenylphenate concentra-	
tronic differentiation of cur-		tion in sweetpotato treating	
rent-voltage characteristics.....	21760	solutions.....	1675
		sweetpotatoes, consumer packaging	
		and decay control.....	9947



# INDEX 1964

Entry	Entry
Kuskokwim River basin: flood control, engineer report— departmental edition----- document edition-----	6501 6206
Kutch, India, ground water in sand- stone of Bhachau area-----	815
Kuwait: economy, basic data----- international finance role, Soviet view----- labor conditions----- parcel post agreement-----	4857 18532 11291 21889
Kuybyshev, Russian SFSR, Institute of Epidemiology, Microbiology, and Hygiene, evaluation-----	16155
Kvateron, see Quaternary ammonium compounds.	
Kvichak River, system, red salmon, segregation in escapements-----	10573
Kwangtung, China, party school, New Zealander speaks-----	9214
Kyanite: and related minerals, minerals and yearbook chapter----- high-temperature heat contents and entropies-----	14739 7448
Kyriakou, Chrysanthos, relief-----	293, 6158, 6402
Kyser, A. C., uniform-stress spinning filamentary disk-----	20527
<b>L</b>	
L series-----	15342
La Batre, Bayou: channel improvement, engineer re- port----- departmental edition----- document edition-----	15864 15413
Labels: commercial, copyrighted----- deceptive advertising and labeling of previously used lubricating oil, FTC trade regulations rule----- economic poisons, labeling with reg- istration numbers----- law----- report----- hardwood products, misbranding, etc., protect consumers, hear- ings----- hazardous substances labeling act, notices of judgment----- Meat Inspection Division program paper, imported, marking require- ments, report----- prohibit unfair and deceptive label- ing, hearings----- steel containers in interstate com- merce----- hearing----- reports----- wool products labeling act, head- wear, exclude, report----- woven textiles identification, amend act----- hearing----- reports-----	6529, 19610 15911 12000 4480 6364, 6500 6736, 18040 1693 10264 540 4501 13983, 15545 15713 4501 12052, 17612 15422
Labetic, Pavica, relief-----	
Labile amino compounds, see Amino compounds.	
Labor: American----- history of movement----- important dates in history----- and material requirements for pub- lic housing construction----- and public interest (address)----- ceramic mosaic tile workers' peti- tion for adjustment assistance, Tariff Commission report----- charts, statistical developments----- code of Federal regulations-----	20435 10309 13072, 20436 2940 1627 3635 10532
Labor—Continued	
colonels and carpenters, strength of Nation (address)-----	7356
Communist China, spare-time edu- cation for workers-----	15856
conditions—	
Aden-----	5446
Australia-----	13078
Cambodia-----	1384
China, Communist-----	9475
India-----	5445
Iran-----	13080
Iraq-----	5443
Israel-----	9474
Korea, North-----	9473
Korea, Republic-----	9476
Kuwait-----	11291
Lebanon-----	11292
Malaya-----	13084
Nepal-----	11295
New Zealand-----	11293
Pakistan-----	13077
Philippines-----	13081
Qatar-----	11290
Ryukyu Islands-----	11289
Saudi Arabia-----	13079
Syria-----	11294
Taiwan-----	5444
Turkey-----	1385
Vietnam, North-----	13083
Vietnam, South-----	13082
construction labor, employment out- look-----	9420
cost in Defense Department, control, hearings-----	17661
developments abroad-----	3636
disability, in labor force, United States, July 1961-June 1962-----	7706
displaced workers, case studies, ex- periences after layoff-----	16610
employment, labor force growth, and productivity, major prob- lems of future-----	1386
factors in workers' decisions to fore- go retraining under Manpower development and training act-----	18610
Formosa, labor law and practice-----	14690
France, immigrant labor problem, Communist Party proposals-----	11151
geographic mobility, summary re- port-----	20980
German Democratic Republic in sys- tem of international socialist division of labor-----	16438
indexes of output per man-hour in private economy, methods and procedures for developing-----	11296
industrial workers, publications, price list-----	13390
international labor (periodical)-----	3607
job tenure of American workers, Jan. 1963-----	5447
journey to work, commutation streams and social and eco- nomic characteristics of com- muters-----	1826
labor digests-----	1384-85, 5443-46, 9473-76, 11289-295, 13077-84.
labor force—	
conducting survey in development countries-----	21668
Czechoslovakia, scope and con- cepts-----	10070
job changing and manpower training-----	13027
monthly reports-----	3433, 3745 6048
Poland-----	1388
projections in U.S. (testimony)-----	5447, 7418, 11297, 14709, 18642, 21677-678
special reports-----	5449, 13074, 18646
advance summary-----	
USSR, material incentives and development of production-----	10725

# JANUARY-DECEMBER

	Entry
Labor—Continued	
labor force—continued	
workers, marital and family characteristics	11297
labor market and employment security	3637
statistical supplement	3638
Louisiana workers benefited by economic expansion (remarks)	8185
markets—	
area trends	3261
bituminous coal mining	4658
cost of moving from one area to another	13663
development of basic information for small areas, handbook	2292
engineering, scientific and technical occupations, current conditions	4657, 19647
foreign policies, lessons	15813
occupational earnings, 1963-64	9479, 18643
wages and related benefits, 82	
labor markets, 1962-63	7374
method for using computer to work out consolidated labor norms, USSR study	16561
Mexico	1372
mobility and private pension plans, vesting, early retirement, and portability provisions study	16609
mobility and worker adaptation to economic change in U.S.	5418
monthly labor review	3739
reprints	2969-71, 5447-48, 7418-19, 9477, 11297, 14709-710, 18642, 21677-678
statistical supplement, 1962	5451
Nigeria	5435
older workers, State laws against discrimination in employment, summary	11260, 16582
operating costs in packing mixed feeds with emphasis on labor and capital	9953
output per man-hour—	
private economy, indexes, 1947-63	7417, 20445
selected industries, index	5441
papers, currently received, list	16567
participation in civil defense	11928
Peru	11274
psychology, USSR studies	7253, 20060
publications, price list	21838
reduced OASDI benefits for retired workers under 65 years of age	21876
requirements—	
for civil works construction by Corps of Engineers	13069
for private one-family house construction	14703
Rumania, protection, prospects for development	9334
skilled, as factor in wage differentiation, USSR study	20154
socialist, scientific organization, USSR study	18238
statistics, interstate conference, report	13085
telephone system construction contract, RFA	13435
terms in English, French, German and Spanish	8835
training of workers in industry, nationwide survey, 1962	11817
unemployment among full-time and part-time workers	18646, 21678
USSR, translations	1132, 2650, 2827, 6826, 7230, 10725, 10875, 11161, 12695, 12778, 16294, 18313, 19928, 20154, 20195

	Entry
Labor—Continued	
utilization in cottonseed oil mills, 1961-62 season	17905
work stoppages, monthly release	4164
worker and farmer share role in building great society (addresses)	13575-576
see also Child labor—Farm labor—	
Hours of labor—Manpower—	
Migrant labor—Wages—Women—also headings beginning Labor.	
Labor (obstetrics):	
labor delivery unit in general hospital, planning	11560
Labor activity as affected by strength of nervous system excitation, USSR study	11004
Labor and Public Welfare Committee, Senate:	
additional staff members and clerical assistants, reports	4563-64
calendar	3672
committee prints	4590, 10429-430, 15813-814, 15817, 19605, 21242
hearings	542-543, 2246-47, 4589, 8452-53, 10431, 12278, 14151-155, 15812, 15815-816, 17884-886, 19604, 19606
investigation and studies, migratory labor, expenses, reports	4539, 6471
reports	471, 513, 2191-92, 2205, 2215, 4527, 4533, 4565, 6484, 8413, 14120, 15725, 15731-732, 15749-755, 17724-725, 17731-732, 17760-761, 17804, 19570
selected readings in employment and manpower (series), vols. 1-2, print additional copies, report	15083
Labor bureaus, etc.:	
State labor departments	11265
United States and Canada, directory	9375
Labor consultants, see Consultants.	
Labor Day, traditional wreath-laying ceremony in honor of Cardinal Gibbons, 1964 (remarks)	18608
Labor Department:	
appropriations, 1963, supplemental, proposal	1990
appropriations, 1964—	
deficiency, hearings	10285
supplemental—	
hearings	6342, 8437
law	8234
report	8416
appropriations, 1965—	
hearings	8359, 8361, 17864
law	19413
proposal	19527
reports	8343, 17623, 17778
careers, management intern program	7355
employment data needed for evaluating, etc., training under Manpower development and training act of 1962, GAO report	10610
general information	7364
Library—	
American trade union journals and labor papers, list	16567
list of recent additions	4026
press releases	3899
programs to equalize employment opportunities (remarks)	16575
publications, subject listing, 1958-June 1963	2945
report, 1963	21662
voluntary farm employment service, authorize, hearings	10431
Labor departments, see Labor bureaus, etc.	

# INDEX 1964

Entry	Entry
Labor disputes:	Labor laws—Continued
emergency board reports—	State—Continued
Eastern, Western, and South-	wage payment and wage collec-
eastern Carriers' Conference... 10478	tion laws—
Florida East Coast Railway... 6583	suggested language..... 14683
National Railway Labor Confer-	summary..... 13033
ence..... 19644	workmen's compensation, history
Pullman Co., and Chicago, Rock	and coverage benefits, sum-
Island & Pacific RR., etc..... 2290	mary..... 11264
United Air Lines, Inc..... 4653	United States, labor law develop-
maritime labor legislation, Depart-	ment, brief outline..... 16579
ment reports on H.R. 1897... 10332	women, protective legislation in 91
Labor force, <i>see</i> Labor.	countries..... 7861
Labor hygiene, <i>see</i> Hygiene.	<i>see also</i> Child labor—Employers'
Labor laws:	liability and workmen's com-
and practice in—	pensation.
Austria..... 5432	Labor legislation, <i>see</i> Labor laws.
Burma..... 16587	Labor-management relations, <i>see</i> In-
Ecuador..... 5433	dustrial relations.
Haiti..... 2958	Labor management relations act, <i>see</i>
Mexico..... 5431	Industrial relations.
New Guinea..... 20434	Labor-management reporting and dis-
Philippines..... 1374	closure act of 1959:
Taiwan (Formosa)..... 14690	bonding provisions of Federal labor
Thailand..... 16588	laws—
Turkey..... 5430	hearings..... 4492
Yugoslavia..... 5434	report..... 15498
and their administration, conven-	electing union officers as prescribed
tion proceedings of Interna-	in title 4, etc., requirements... 18611
tional Association of Govern-	legislative history..... 13461
mental Labor Officials, discus-	reporting requirements for employer
sion..... 7366	and labor consultant..... 16577
Federal, bonding provisions—	technical assistance aid (series)... 16577,
hearings..... 4492	18611
report..... 15498	text..... 14668
Federal laws and programs, lay-	Labor markets, <i>see</i> Labor.
man's guide..... 14671	Labor offices, <i>see</i> Labor bureaus, etc.
improvements, as role of IAGLO	Labor organizations, <i>see</i> Labor unions.
(remarks)..... 16576	Labor relations, <i>see</i> Industrial rela-
litigant's role and public interest	tions.
(address)..... 7593	Labor standards:
Mongolian People's Republic, code-	fair labor standards act—
State—	agriculture and related exemp-
affecting women—	tions..... 13511
Alabama..... 13543	amend to provide coverage to em-
Alaska..... 20886	ployees of hotels, etc., hear-
Arkansas..... 13544	ings..... 19507
Delaware..... 11723	amendments of 1964—
digest of 1963 legislation..... 7859	hearings..... 15586
general information..... 13550	text..... 7837
Illinois..... 19033	application to—
Indiana..... 11724	forestry or logging operations... 16913
Iowa..... 9893	poultry and egg business..... 7838
Maine..... 19034	seamen..... 11679
Massachusetts..... 19035	wholesale grocery business..... 1652
North Carolina..... 13545	bona fide thrift or savings plan,
North Dakota..... 15176	requirements..... 11683
Ohio..... 11725	child labor provisions, guide..... 9874
summary, 1963..... 7865	computing overtime pay, as
Tennessee..... 13546	amended, 1961..... 20875
Utah..... 13547	coverage of wage and hour pro-
against discrimination in em-	visions—
ployment, summary—	construction industry..... 11678
fair employment practice acts... 11259	general..... 11677
older workers..... 11260, 16582	defining terms executive, ad-
and Federal—	ministrative, etc., report, etc.,
coverage of agricultural work-	of presiding officers at hear-
ers..... 13032	ings..... 1655
status of agricultural workers... 16580	definition of area of production... 9876
child labor laws—	employment of—
questions and answers..... 11255	handicapped in sheltered work-
summary..... 11254	shop..... 11681
legislation enacted in 1963..... 5424	homeworkers in industries..... 11682
mediation laws, summary..... 11261	learners..... 16916
minimum wage laws, summary... 11256,	messengers..... 16917
14673	student learners..... 11680
occupational safety and health,	equal pay for equal work..... 13513
summary..... 11263, 14674	Federal-State cooperation for em-
prevailing wage laws, sum-	ployment and age certificate is-
mary..... 11257	surance, directory..... 9376
regulating industrial homework,	handy reference guide..... 13512
summary..... 11262	hours worked..... 1653, 15146
union regulatory provisions, sum-	how it operates in our town..... 20876
mary..... 16583	increase overtime penalty rate,
	hearings..... 6352, 17645, 19505

# JANUARY-DECEMBER

Entry

4683  
3033

1264

9379

7861

4492

5498

8611

3461

6577

4577

8611

4668

3511

9507

5586

7837

6913

7838

1679

1652

1683

9874

0875

1678

1677

1655

9876

1681

1682

16916

16917

1680

3513

9376

13512

15146

20876

19505

Entry

## Labor standards—Continued

fair labor standards act—Con.	
joint employment relationship—	19015
maximum hours, exemption of	
employees of motor carriers—	19014
operation, general information—	20876
overtime compensation—	9875
overtime pay, basic rates for	
computing—	7838, 9877
profit sharing plan or trust,	
regulations—	11684
quick look at hours worked under,	
information folder—	15149
radio and television station em-	
ployees, exemption from over-	
time pay regulation—	3187
records to be kept by employers,	
regulations—	5750-51, 16915
reduce maximum workweek, hear-	
ings—	6352
retail and service enterprises and	
establishments—	13514
retailers of goods or services—	19013
seasonal industries regulations—	7840
talent fees, defining term—	16918
wages of persons engaged by	
Federal contractors to fur-	
nish cleaning services, etc.,	
to Federal agencies, pro-	
vide—	
hearings—	12127
report—	12112
white-collar exemptions—	13515
written assurances with respect	
to hot goods—	16914
young workers, provisions appli-	
cable—	15147
good day-haul practices—	16585
safety standards—	4003

## Labor Standards Bureau:

bulletins—	5419, 7365-66, 9375,
	11253, 13032, 14670-671, 16578,
	18612-614.
fact sheet (series)—	11254-265,
	13033, 14673-675, 16579-583
leaflet—	16584

## Labor Statistics Bureau:

BLS report series—	1366-74, 2949-60,
	5426-35, 7372-73, 9377-81,
	11268-274, 13042-46, 14685-691,
	16586-589, 18621-628, 20432-
	434, 21666-670.
bulletins—	1375-83,
	2961-65, 5435-39, 7374-7415,
	9382-9469, 11275-285, 13047-73,
	14692-706, 16590-613, 18629-
	640, 20435-442, 21670A-673.
publications—	3288, 16614
studies in industrial relations,	
1954-63—	11286

## Labor Statistics, Interstate Confer-

ence on, *see* Interstate Confer-  
ence on Labor Statistics.

## Labor turnover:

employment and earnings (period-	
ical)—	3433
factory, monthly release—	3454

## Labor unions:

agreements with Post Office De-	
partment, 1963 and 1964—	15026
American labor movement, history—	20435
directories—	
ICFTU—	4870
national and international in	
U.S., 1963—	16605
Western Hemisphere, Antigua,	
Grenada—	21376
European trade union federations,	
strained relations—	18358
Ideals are like stars (address)—	20426

Entry

## Labor unions—Continued

labor-management reporting and	
disclosure act—	
bonding provisions of Federal	
labor laws—	
hearings—	4492
report—	15498
electing union officers, require-	
ments—	18611
membership, 1962—	5453
movement today (address)—	2938
neighborhood Youth Corps and your	
union—	21659
organizational campaigns, employer	
rights and limitations (ad-	
dress)—	5561
register of reporting labor organi-	
zations, Jan. 1, 1964—	
complete edition—	16569
Great Lakes States—	16572
Middle West, Rocky Mountain	
States—	16573
Northeastern States—	16570
Southeastern States—	16571
Western States—	16574
selected references, list—	2941
staff intellectual in labor movement	
(statement)—	2974
State regulatory provisions, sum-	
mary—	16583
subversive, abuse of tax exemp-	
tions—	
hearings—	15811
report—	17883
supervisor relationships, Army	
Dept. civilian personnel pam-	
phlet—	5941
trade journals and labor papers	
currently received, list—	16567
trade union policy of Italian Social-	
ist Party—	2591
USSR, congresses and conferences	
on medical trade union work,	
news—	1310
<i>see also</i> names of unions.	

## Laboratories:

automated, for psychological re-	
search, programming needs—	1736
civil defense emergency hospital,	
section—	21851
Engineers Corps, Army, investiga-	
tional and research facilities—	17952
high temperature furnace used,	
USSR study—	2810
parasitology, work described, USSR	
study—	11099
problem-solving laboratory, USSR—	9155
radioactive substances, safety re-	
quirements for use, USSR	
studies—	18266
radionuclide analyses, environ-	
mental surveillance—	21847
research and field, water pollution	
control, establish—	11573
smelting of copper precipitator	
dust—	5483
standards in United States, direc-	
tory—	20636
<i>see also</i> Medical laboratories—	
Radiation laboratories— <i>also</i>	
names of laboratories or places	
where located.	

## Laboratory animals, *see* Animals.

## Laboratory apparatus and supplies:

Federal item identification guides	
for supply cataloging—	12293
supplements—	3474
stainless steel fume hood for safety	
in use of perchloric acid—	14755
Laboratory-industrial cleaning tech-	
niques and materials—	14167
Laborers' Pension Fund of Hudson	
County, N.J., qualify as trust	
for tax exemption purposes—	2007



# INDEX 1964

	Entry		Entry
Labovitz, I. M., catalog of Federal aids to State and local governments	10421	Lakehurst Mine, exploration and pilot plant testing of ilmenite-bearing sands	2981
Labrador, asterolea of Blue Dolphin expeditions to Labrador	7599	Lakeland quadrangle, Fla., economic geology	19775
Lacassine National Wildlife Refuge, birds, list	6724	Lakes:	
Lace-bugs, genus <i>Acalypta</i> , Hemiptera, Tingidae, American species	7605	Canada, ice prediction curves	17937
Lacey, Robert E., desalination by electrosorption and desorption	18163	climatic review	3707
Laciskey, John F., union wages and hours, motortruck drivers and helpers	14701	Columbia River basin, change of storage	4058
Lacquer and lacquering, current industrial reports	3390	deposits, ancient, Precambrian to Pleistocene in Western States, review and annotated bibliography	15940
Lacroix, Henri P., address, June 23, 1964	14678	ice formation in temperate climate	8507
Lactams, bactericidal effect, USSR articles	10845	Latvia, prospects for utilization—see also names of lakes	21555
Lactic acid, arterial, of dogs at 21,000 feet, transient changes	9986	Lakshmanan, T. K., chemical formation of microcircuit elements	7996
Lactones, bactericidal effect, USSR articles	10845	Lam Chong, relief	15431
Ladd, Richard S., treasure maps and charts, list	14716	Lamale, Helen H., paper, Aug. 6-9, 1963	5429
Ladders:		Lamb:	
fixed, comparison of State codes with ASA, chart	5420	imports, restrict—	
portable—		hearings	10418, 14135
metal, comparison of State codes with ASA, chart	7368	reports	14098, 15544, 21194
wood, comparison of State codes with ASA, chart	20430	slaughtering, cutting, and processing on farm	9941
Ladino language, books in Library of Congress, bibliography	5456	Lambert, Robert W., documents on disarmament, 1963	19200
Ladner, James E., earth orbital satellite, lifetime	3013	Lambs:	
Laemmerzahl, Arthur J., basic data on economy of Yugoslavia	18180	crop, 1963	9841
Lafayette, La., population, special census	174	on feed—	
Lafayette County, Wis., loading and transportation at zinc-lead mines, Eagle-Picher Co.	5477	Nov. 1, 1963	7808
La Grange Park, Ill., population, special census	181	Jan. 1, 1964	9844
Lags in reducing infant mortality	13536	Mar. 1, 1964	13488
Laguna Atascosa National Wildlife Refuge, general information	4737	Laminar flow, see Flow	
Laguna Indian Reservation, availability of ground water	12514	Laminar heat transfer over melting plate, modified Leveque problem	10485
Lahontan, Lake, geology of southern Carson Desert, Nev.	10639	Laminated materials:	
Laissez faire, private enterprise operations, role of self-regulation in advertising	11978	Douglas-fir bolts used in joints, performance	8674
Lake, see name of lake, except when occurring as first word of name of town, etc.		Echo II laminate—	
Lake County, Oreg., Fort Rock Basin, factors that control occurrence and availability of ground water	19783	effect of electron irradiation on properties	21765
Lake Erie, Battle of, Sesquicentennial Celebration Commission, see Battle of Lake Erie Sesquicentennial Celebration Commission		mechanical properties	16690
Lake Mead National Recreation Area: administration—		flexible honeycomb structure can bend to fit compound curves	13183
law	21131	phenolic laminates, fatigue strength under repeated load	12447
report	2068	stresses within curved beams of Douglas-fir	8640
general information	7612	structural sandwich, plastic laminates, and wood-base components, list of publications	18047
Lake of the Pines, general information	17960	wood beams, prestressed, comparison, etc.	8672
Lake States, see Great Lakes States		wood laminates in flexure for marine use, design criteria	9762
Lake States Forest Experiment Station, report, 1963	12431	see also Plastics	
Lake Tapps quadrangle, Wash., surficial geology and geomorphology	809	Lamont, William E., sintering of pyrrhotite calcine	1435
Lake trout, see Trout		Lamps:	
		Federal item identification guides for supply cataloging	12293
		supplements	3474
		see also Electric lamps	
		Lancaster, Pa., consumer expenditures and income, 1961	2952-53
		Land:	
		acquired by Federal agencies for projects, reimburse owners for moving expenses, report	14076
		acquisition and development financing, conventional loans	3367
		acquisitions, title evidence preparation, standards	20424
		agricultural in Alaska, development, hearing	8354
		and water conservation fund act—implementation (remarks)	21829
		landmark in legislation (remarks)	18870
		policies and procedures (remarks)	18871

	Entry	Entry
Land-Continued		
and water conservation fund, establish—		
hearing	15809	
law	17436	
reports	341, 12064, 17619, 17713	
better utilization for planned-unit development with homes association	6636, 19685	
California's snow zone land, managing for water	8688	
cropland retirement program, hearings	6492	
development in Indus Plain, report	21837	
hydrologic effects of land use (series)	4804	
interstate mail order sales, hearings	19586, 21237	
listing in urban renewal project areas available for private redevelopment	7827	
man, land & food, world food problem	567	
national reserve, classification, North Platte River basin	11301-302	
need for conservation fund (remarks)	1534	
open-space program guide	20863	
ownership of rural land in the Southeast	4611	
planning bulletins	6636, 19685	
public open-space programs and activities in National Capital region	7583	
rural residential recreation subdivisions serving Washington, D.C. area, 1963	15835	
submerged, Guam, Virgin Islands, and American Samoa, place jurisdiction within, law	263	
submerged land act, effect on title to naturally-made land, opinion of Attorney General	7350	
subsidence and artesian-pressure decline	10661	
use, adjustment program, statistical summary, 1963	9928	
use conference, report	7714	
USSR virgin lands policy, role of Khrushchev, French anticommunist analysis	9092	
see also Public lands.		
Land banks, see Federal land banks.		
Land-grant colleges:		
and State universities, research work in agriculture (address) and universities, statistics—	5865	
1961	606	
1962	19639	
preliminary report, 1963	587	
funds to establish water resources research centers—		
law	15396	
reports	6280, 10248, 13958	
salaries and student charges, 1963-64	14195	
workers in agricultural subjects	7909, 20909	
Land Management Bureau:		
BLM at work in Oregon and Washington	13089	
careers in resource management, forestry, administration, minerals, etc.	18649	
geologists, examination announcement	19339	
press releases	3900	
Land operation facilities, changes	3200	
Land scrip:		
claims, lieu selection, and similar rights, provide satisfaction—		
law	17404	
reports	8298, 17773	
Land titles, see Land.		
Lander, James F., United States earthquakes, 1961	220	
Landers, William S., bulk density studies on commercial blend of western coking coals	18686	
Landes, R. A., internal environmental simulator for man-machine system design	15004	
Landing (aircraft):		
all-weather systems, pilot acceptance	11353	
closed-circuit television, brief study of use	7543	
equipment, Federal item identification guides for supply cataloging	12297	
supplements	3478	
instrument-landing approach, plotted simulator study of loss of altitude by jet transport in go-around	1471	
manual blind landing performance using closed circuit TV displays, flight study	13226	
night carrier, utilizing luminescent and reflective coatings as visual aids	13328	
rough-terrain-induced structural landing loads, determination	7819	
supersonic transport, handling qualities in landing maneuver	9602	
Landing (spacecraft), see Spacecraft.		
Landing gear, wing-flap-actuated warning system, civil air regulations, amendments	12359, 12372	
Landrock, Arthur H., fluidized-bed coating with plastics	6551	
Landrum, Emma J., effect of skewed wing-tip controls on highly swept arrow at Mach number 2.03	20582	
Landry, J. W., sequenced gas sampling experiment	118	
Lands, see Public lands.		
Landscape:		
aides, suggested training program	15850	
Philmont country, famous New Mexico ranch	10647	
Landscape architects, employment outlook	9401	
Lane, W. B., debris from underground nuclear detonation	5981	
Laney, Charles C., Jr., flashing-beacon experiment for Mercury-Atlas 9 (MA-9) mission	16694	
Lanford, Wade E., chemicals as agents for smoke-trails for windshear measurements	20586	
Lang, William E., triaxial balancing techniques, study of spacecraft balance with respect to multiple axes	9578	
Lange, E. A., rotating-beam test for low-cycle fatigue crack propagation studies	18864	
Langford, Elizabeth A., State variations in income of aged, 1959	3133	
Langley hotshot tunnel, calibration tests, description	5511	
Langrenus, LAC 80, lunar chart	7991	
Langsdorf, Grigorij, scientific explorations in Brazil in 1820's, forgotten records	7302	
Langsford, E. L., extent and cost of using chemicals in cotton production	12313	
Language and languages:		
books on philology, etc., classification, Library of Congress	9484	
coding of work meanings according to symbols of objects expressed by them	8914	

# INDEX 1964

Entry	Entry
Language and languages—Continued	Laos—Continued
financial assistance for strengthening instruction in public schools, guidelines.....	United States contributions for supervision and control—
8488	hearing.....
foreign languages—	law.....
and English dictionaries in physical sciences and engineering, selected bibliography 1952-63.....	reports.....
16737	13967,
and your career.....	18958
20444	Viet-nam boundary, study.....
grants for advanced graduate students, teachers, and professors.....	Lapps, Finnish, cesium-137 and potassium body content.....
4622	13392
students, junior-year enrollments, survey, 1962.....	LARC-XV (lighter, amphibious, resupply cargo), see Cargo carriers.
10467	Lard:
instruction methods in Soviet Union.....	futures trading and open contracts, production, United States by months.....
10905	11647
language laboratory, how effective is it?.....	La Riviere, J. R., Hanford isotopes production plant engineering study.....
14189	8057
Marxist-Leninist gnosiology and problem of sign and meaning, USSR study.....	Larkspur, livestock poisoning in West States, reducing losses.....
5139	20915
mathematical linguistics—	Larned, Fort, National Historic Site, see Fort Larned National Historic Site.
international seminar, 1963, Bucharest, Rumania.....	Larsen, Arthur B., optimization study of high power static inverters and converters.....
2833	13140
USSR study.....	Larsen, Marion R., agricultural situation and crop prospects in Communist China.....
18512	21262
modern—	Larsen, Wesley M., soil survey, Sargent County, N. Dak.....
foreign, handbook for guiding students.....	7743
2273	Larson, L. P., mineral industry of Arizona.....
language programs, selection and organization of library material.....	1406
6579	Larvae:
national defense education act—	bloodsucking mosquitoes (Culicidae) of North Vietnam, study.....
foreign language fellowships, approved languages.....	Chironomid, semi-commercial raising, USSR experiment.....
17917	2559
language development program, research completed, etc., list.....	see also names of insects, etc.
2276	Laser radiation weapons, see Weapons.
language institute program, manual.....	Lasers:
10468	biological effects, safety recommendations, and concept of ocular damage.....
language institutes program, 1964-65.....	20702
4629	deep space optical communications systems study.....
2272	16652
language laboratory facilities, technical guide, erratum.....	GaAs, output power, at room temperature.....
19633	19175
NDEA and higher education (periodical).....	laser-satellite reflection parameters, materials, tutorial review and bibliography.....
3782	20519
NDEA language and area centers 1st 5 years, report.....	optical quantum oscillators, use in biology and medicine, prospects, USSR study.....
19634	5308
NDEA language and area centers program in non-western language.....	optical tests on ruby samples.....
19633	13346
title 3, grants to strengthen instruction, questions and answers.....	ruby—
15855	light transmission through water, transverse modes using beat frequency detection and fast photography.....
order and government of words in certain types of sentences, USSR study.....	5597
7118	transverse detection and fast photography.....
western, southeast Asia annotated bibliography sources.....	19165
21680	solid state optical masers, bibliography.....
see also names of languages.	7956
Lanowski, Witold A., relief.....	Lassen National Forest:
15623,	land exchange—
17189	law.....
Lansche, Arnold M.:	reports.....
arsenic.....	15515,
13101	17766
cadmium refining by amalgam electrolysis.....	Lassen Volcanic National Park, general information.....
7434	14972
Lansing, Donald L., application of acoustic theory to prediction of sonic-boom ground patterns from maneuvering aircraft.....	Lassiter, Roy L., Jr., utilization of U.S. otter-trawl shrimp vessels in Gulf of Mexico, 1959-61.....
20580	14271
Lansing, John B.:	Las Vegas, Nev.:
cost of geographic mobility.....	aerial radiological measuring survey (ARMS) of area.....
13663	4292
geographic mobility of labor, summary report.....	aircraft accident.....
20980	13787
propensity to move.....	consumer expenditures and income, 1962.....
17025	9379-80
Lanthanide, series and yttrium, separation using phosphonic and iminodiacetic acid resins.....	Latah County, Idaho, Bovill clay and sand deposit, geology, etc.....
18693	5480
Laos:	Late Cretaceous cephalopod Haresl-ceras Reeside and its possible origin.....
Burma boundary, study.....	8770
15100	
Cambodia boundary, study.....	
15099	
China boundary, study.....	
15101	
economy, basic data.....	
21079	
Lao Neutrallist Party, biographical notes on prominent members.....	
7329	
prescription for peace.....	
13667	

# JANUARY-DECEMBER

	Entry		Entry		
	Lategola, Michael T., in vivo measurement of total gas pressure in mammalian tissue-----	1789	Laundry and laundries: areas, house planning aids-----	16061	
	Lateral sclerosis, see Amyotrophic lateral sclerosis.		employees, coverage under Fair labor standards act, provide, hearings-----	19507	
	Lathers, employment outlook-----	9422	home laundering, equipment and job-----	20923	
	Lathes: converted for grinding aspheric surfaces-----	14814	industry wage survey-----	16607	
	copying, for shoes, temporary suspension of duties, continue-----		sanitation in home laundering-----	7923, 16954	
	law-----	13885	supervisory jobs, examination announcement-----	6088	
	reports-----	8350, 12241	Lauver, Milton R., shock-tube heat-transfer experiments to measure thermal conductivity of argon-----	7522	
	Lathrop, Calif., see Sharpe General Depot, Lathrop.		Lavender, Robert E., touchdown dynamics analysis of spacecraft for soft lunar landing-----	5510	
	Latin America: alliance for progress-----	18957	Laventhol, Jesse, major legislative actions, 88th Congress-----	19437	
	and agriculture (address)-----	11750	Law, Francis E., testimony, hearings-----	6526	
	financing assistance, agreement with Pan American Union-----	9823	Law, Frank E., dental care services for school children-----	13421	
	reaches turning point (addresses)-----	12562	Law: administrative, related to FCC procedures (address)-----	21294	
	reports-----		divorce laws, July 1, 1964-----	19032	
	1st annual review-----	4496	East European, legal journals, abstracts-----	907, 919, 941, 953, 1026, 1119, 1193, 2512, 2685, 2750, 2788, 2831, 4893, 5037, 5063, 5261, 5404, 6979, 7046, 7066, 7094, 7127, 7181, 7319, 9025, 9151, 9173, 9273, 10831, 10845, 10947, 10974, 11035, 11145, 11159, 11174, 12665, 12914, 12937, 14446, 16074, 16091, 16270, 16450, 16535, 18228, 18497, 19833, 19911, 19940, 19970, 20116, 20134, 20145, 20150, 20164, 20257, 21535	
	Jan. 1-June 30, 1963-----	12027	general interest, summary, 88th Congress-----	21218	
	July 1-Dec. 31, 1963-----	17448	human rights, recent developments in Soviet bloc, hearings-----	8381	
	3d anniversary (address)-----	9798	Judge Advocate legal service, Army pamphlets-----	98-101, 1761, 4282-83, 5945-46, 8027-32, 10002-4, 11839-841, 13671-674, 17039, 19205-206, 20992-993	
	bibliographic survey of hemispheric partner, Army pamphlet-----	15270	judicial procedures in litigation with international aspects, improve-----		
	comments on current international political events-----	7265	law-----	19427	
	Cuba, Latin America and communism (address)-----	1598	reports-----	2078, 19562	
	democracy vs. dictators, what U.S. can do-----	20820	legal proceedings, testimony by employees and production of records, Federal aviation regulations, change-----	4683	
	inflation and economic development-----	2570	Mongolian People's Republic, law and legal documents-----	21538	
	paperback books, bibliography-----	13090	Mongolian studies-----	18333	
	press usage of abbreviations, glossary-----	18542	procurement legal service, Army pamphlets-----	108, 4287, 5947-48, 10010, 11846, 13679, 19213	
	private investment-----		publications, price list-----	13387	
	hearings-----	6193	slip laws (private), 88th Congress-----	245-270, 1920-85, 6137-69, 8199-8215, 11987-999, 13840-865, 17168-240, 19371-388, 21103-117	
	report-----	12013	slip laws (public), 88th Congress-----	245-270, 1920-85, 3946, 4420-21, 6170-87, 8216-34, 10139-147, 12000-10, 13866-915, 15383-398, 17241-439, 19389-433, 21118-158	
	savings and loan associations, place in (address)-----	4689	State-----		
	social progress trust fund agreement with Inter-American Development Bank, protocol-----	9824	equal pay laws, digest-----	13541	
	Latitude, geocentric, of space point, USSR study-----	16449	time off for voting-----	14670	
	Lattices (reactor): heavy water lattice project annual report-----	10234	use of computers in field of law, USSR study-----	16500	
	Latvian Soviet Socialist Republic: Academy of Sciences, interview with K. K. Flaude, president-----	16499			
	lakes, prospects for utilization-----	21553			
	scientists, important problems-----	1249			
	Laughrey, James A., high-speed photographic investigation of formation of detonation waves in stoichiometric hydrogen-oxygen mixture-----	11393			
	Launch vehicles, see Spacecraft.				
	Launchers: Mark 16, Mark 112, etc., description, operation and maintenance, ordnance pamphlet, change-----	7657			
	Saturn V launch vehicle, proposed versions, aerodynamic characteristics-----	14883			
	Launches, shallow-draft plastic launch, description, USSR-----	9060			
	Launching facilities: aircraft equipment, Federal item identification guides for supply cataloging-----	12297			
	supplements-----	2478			
	launch environment profiles for sounding rockets and spacecraft-----	5508			



# INDEX 1964

Entry	Entry
Law—Continued	Lead :
<i>see also</i> Codes of law—Commercial law—Criminal law—International law—Labor laws—Legislation—Military law—Statutes at large— <i>also</i> subjects.	disposal from national stockpile—
Law enforcement :	hearings ----- 13992
career opportunities, Treasury enforcement agent ----- 9863	law ----- 15390
officers, guide to laws enforced by Alcohol and Tobacco Tax Division ----- 14366	reports ----- 13938, 14095
Lawlor, Patrick J., research and development of propellant feed systems for ion engines ----- 13147	geology of upper Mississippi Valley zinc-lead district ( <i>see</i> rics) ----- 797, 18102-103
Lawn insects, how to control them ----- 7919	industry—
Lawns, better, establishment, maintenance, renovation, problems, grasses ----- 11760	mineral industry survey, monthly ----- 3640
Lawrence, Charles E., directory of public training schools serving delinquent children ----- 198	review of 1963, outlook for 1964 ----- 8101
Lawrence, Phillip S., medical care, health status, and family income ----- 11584	USSR activities ----- 2856
Lawrence, Sylvia K., scientific and technical personnel in industry, 1961 ----- 9665	lead-zinc—
Lawrence, Mass., occupational wage survey ----- 18634	deposits in Município de Januária, Minas Gerais, Brazil ----- 6796
Lawrence County, Pa., coal resources ----- 19771	domestic mining industries, stabilise—
Lawrenceburg, Tenn., ground-water geology of area ----- 10799	hearings ----- 536
Lawroski, Stephen, reactor fuel processing, review of recent developments ----- 3960	report ----- 2195
Laws, <i>see</i> Codes of law—Commercial law—Criminal law—International law—Labor laws—Law— <i>also</i> subjects.	loading and transportation, Eagleicher Co. mines ----- 5477
Lawson, F. R., effect of light traps on hornworm populations in large areas ----- 11	mine production, mineral industry survey, monthly ----- 3641
Lawton, Thomas O., jr., relief ----- 21181	minerals yearbook chapter ----- 21695
Lawyers :	ores and concentrates, marketing in U.S. ----- 13105
American economic progress, bar and patent system (address) ----- 20715	report on 7th session of international study group ----- 10319
American economy, patent system, and the bar (address) ----- 16805	slimed minerals, polyethoxylated amines as flotation collectors ----- 9509
assigned by court in criminal cases, compensation—	Lead molybdate, low temperature heat capacities and entropies at 298.15° K ----- 7437
law ----- 17314	Lead oxides :
reports ----- 378, 15555	ceramic, makes excellent high-temperature lubricant ----- 20555
employment outlook ----- 9402	morphology of PbO <sub>2</sub> in positive plates of lead acid cells ----- 15007
licensed attorneys' automatic admission to practice before Federal agencies, report ----- 2189	Lead poisoning, animals, distribution of radioactive calcium and its excretion, USSR study ----- 20417
rules governing practice before Internal Revenue Service ----- 19002	Lead tungstate, low temperature heat capacities and entropies at 298.15° K ----- 7437
<i>see also</i> Public defenders.	Leaders' Conference, Equal Employment Opportunity Regional Community, <i>see</i> Equal Employment Opportunity Regional Community Leaders' Conference.
Laycock, Mary L., relief ----- 6426, 15479, 17240	Leadership :
Layout, <i>see</i> Plants (Industrial).	Air Force officers ----- 11789
Leach solutions, <i>see</i> Solutions.	business, and Neighborhood Youth Corps ----- 21658
Leaching :	fitness, suggestions for colleges and universities ----- 18881
acid—	Mr. Roosevelt's three wars, FDR as war leader (lecture) ----- 9966
of manganese concentrates and electrolytic recovery from solution ----- 13118	naval, principles and problems ----- 16795
Spor Mountain beryllium ore ----- 1440	Navy, manual ----- 9681
alkaline—	Leadership of Medical Division, Hungarian Academy of Sciences, annual report ----- 2859
leach milling processes, radioactivity ----- 5492	Leaf blight of boxelder attributed to 2,4-D spray drift ----- 18069
processing of subgrade calcareous uranium ore ----- 9525	Leafhoppers, subfamily Neocoleidinae, generic revision ----- 7604
ammoniacal-ammonium carbonate, of manganiferous materials from southern district, Aroostook County, Maine ----- 7446	<i>see also</i> Cicadelloidea.
copper sulfide minerals with autotrophic bacteria ----- 11329	Leaflets, <i>see</i> names of departments, etc., issuing leaflets— <i>also</i> subjects.
from western redcedar shingle tow, toxic effects on Douglas-fir seedlings ----- 8656	Leak, William P., estimating maximum allowable timber yields by linear programming ----- 8681
mercury, continuous-circuit method, cost estimates and optimum conditions ----- 14744	Leak detectors, helium mass spectrometers use ----- 14834
	Leaks, containment-vessel leakage rates, comparison of absolute- and reference-system methods of measuring ----- 20573
	Learners, <i>see</i> Apprentices—Motor vehicle operators.

# JANUARY-DECEMBER

	Entry		Entry
Learning:		Lebiastinae, <i>see</i> Characidae.	
animal and machines, USSR study.	1024	Lecar, Myron, departures from local thermodynamic equilibrium in AO star atmosphere.	7519
Bayesian learning processes.	64	Leckner, Eleanor J., public health nurse in program for mentally retarded.	10082
computer-aided, sound identification, experiments.	15003	Lectures, <i>see</i> Addresses, lectures, etc.	
one-trial, and quantum psychophysics, synthesis.	15006	Lecznar, William B.: comparison of test items across forms.	9984
programed, and self-instructional media, research grants and contracts.	2287	years of education as predictor of technical training success.	9983
public welfare staff training project.	7851	Lee, An Fu Wang, relief.	6255
response and feedback techniques for automated training of visual identification skills.	20703	Lee, Charles Chung Chi, relief.	21224
use of cuing in training tasks.	13323	Lee, Charles F.: handling and packing of frozen breaded shrimp, etc.	6710
Leases:		mechanizing blue crab industry.	4729
geothermal steam deposits, issuance of leases.			6705, 14269
hearing.	4586	oyster industry of Chesapeake Bay, South Atlantic, and Gulf of Mexico.	10558
report.	17826	Lee Chung Woo, relief.	15434
intercity communications lines of civil agencies, costs resulting from failure to consolidate leasing, GAO report.	21343	Lee, Douglas H. K., heat and cold effects and their control.	11569
mineral leasing act, amend as to coal leases, reports.	15560, 17784	Lee, E. B., rocket booster control, sufficient condition in optimal control.	13146
naval properties in Virgin Islands, leasing, status, hearings.	4588	Lee, F. R., permissible mine equipment approved by Mines Bureau during 1953-62.	9496
oil and gas.		Lee, Henry A., dynamic-model investigation of Gemini spacecraft in Langley spin tunnel.	11387
entered into by Navajo Indians, approve law.	262	Lee, Jean T.: field operations of National Severe Storms Project in spring 1963.	11709
timely payment of rentals, report.	17835	summary.	11696
U.S. lease no. Sacramento 037652-C, reinstatement and validity.	1863, 2162	Lee, Jong Wan, relief.	8278
phosphate, increase acreage limitation.		Lee, Julia, relief.	21224
hearing.	14145	Lee Shue Chung, <i>see</i> Lee Suey Jom.	
law.	17406	Lee, Stanley, testimony, hearings.	10438
reports.	17558, 17777	Lee Suey Jom, relief.	241
Post Office Department for real property, extend authority.		Lee, Tung-Ming: dynamic properties of visco-elastic solids.	8510
law.	17339	vibration of sphere for determining dilatational constants of visco-elastic materials.	10486
reports.	10215, 12212	Lee, W. W., high density optical memory drum.	11783
Least squares, pressure, volume, and temperature data on gases, application method.	16626	Lee, William O., chemical control of weeds in crimson clover.	7950
Leather, hides, and skins:		Lee County, Ga., geology and groundwater resources.	2432
cattle hides, curing at lower costs and greater efficiency, guide.	12308	Lee County, Ky., opportunities for economic growth.	19197
leather footwear, comfort factors.	3117	Lee Transportation Co., Inc., accident.	14404
leather goods, general repair, Army technical manual.	1765, 11848	Leedom, Boyd, address, Dec. 4, 1963.	1508
leathers, Federal item identification guides for supply cataloging.	12296	Lees, E. A., failure of stainless steel clad fuel assembly.	10031
supplements.	3477	Lees Ferry area, Coconino County, Ariz., geology.	798
personal leather goods, current industrial report.	3390	Leeward Islands, British, economy, basic data.	8823
<i>see also</i> names of articles manufactured from leather.		Legal opinions, rulings in administration of Railroad retirement act and Railroad unemployment insurance act, 1961.	15074
Leave of absence:		Legal procedures, <i>see</i> Law.	
annual and sick leave act of 1951, extend benefits to employees of county committees, hearings.	15601	Legal series, Farmer Cooperative Service.	4067
Federal agencies, principles and procedures, GAO guidance manual.	792-793, 2399	Legal services, <i>see</i> Law.	
military personnel, administration at Dow Air Force Base, Maine, GAO report.	6763	Legendre polynomials, <i>see</i> Polynomials.	
sick leave benefits, police and firemen of D.C., U.S. Park Police, and White House Police.		Legendre polynomials, <i>see</i> Polynomials.	
law.	17330	Leggat, E. A., ground-water resources of lower Mesilla Valley, Tex. and N. Mex.	4815
reports.	6323, 15773	Legislation: actions affecting union citizens, 1963-64.	21238
Lebanon:			
labor condition.	11292		
market factors.	10697		
sailing directions.	7632		

# INDEX 1964

	Entry	Entry
Legislation—Continued		
education, new legislative land-		
marks, highlights, 88th Con-		
gress, Oct. 1963–Feb. 1964	12324	
legislative highlights over past 4		
years, review	21217	
major legislative actions, 88th Con-		
gress	273,	
4425, 8240, 10151, 13917, 15401,		
17443, 19436–437.	4516	
record, 1961–63		
Republican report, 88th Congress,		
1st session	2133	
summary, 88th Congress, 2d ses-		
sion	21217	
see also Labor laws—Law—also		
subjects.		
Legislative appropriations, see Appro-		
priations.		
Legislative history of Davis-Bacon		
act	10307	
Legislative jurisdiction, see Jurisdic-		
tion.		
Legislative Standards Commission,		
establish, hearings	14156	
Legumes, Great Plains, northern		
and central, dryland cropping		
systems, review of literature.	7934	
Leguminosae, see Dussia.		
Lehigh County, Pa., soil survey re-		
port	3138	
Lelf Erikson Day:		
Oct. 9 in each year, proclaim—		
hearings	19516	
law	17424	
report	17517	
Leigh, Jesse, jr., relief	1915, 2169	
Leighton, John H., jr., T-39A limited		
stability and control tests	7969	
Leik, Francis H., relief	6438, 8213	
Leitz, F. J., sodium cooled reactors		
program, fast ceramic reactor		
development program	5959	
Leitzel, Fusako, relief	427	
Lemaitre, C. G., three-body problem.	20531	
Lempel, M. J., application of comput-		
ers to heat flow and cost anal-		
ysis in furnace wall design	18699	
Lena River, adaptation of young core-		
gonines	7107	
Lend-lease operations:		
report, 1963—		
departmental edition	16873	
document edition	15404	
Lenders handbook, guaranty or insur-		
ance of loans to veterans of		
World War II and Korean		
conflict, change	1650	
Lending operations, see Loans.		
Lenin, Vladimir I.:		
collectivism principle, restoration,		
etc., in party leadership, 1953–		
63, USSR study	19994	
reflection theory, relative to con-		
cept of information, USSR		
study	18315	
thoughts on his role in Communist		
movement	8876	
Lenin prizes:		
attainments, 1964, Soviet Science		
and technology	11228	
awards, 1963, scientists	8964	
Gaysky, V. N., candidate, 1964	9253	
nominations, 1964, field of science		
and engineering	2743	
science and engineering	16030	
works accepted for competition,		
1964	10746	
Leningrad University:		
Geophysical Methods of Explora-		
tion Dept., work report	7041	
Geophysical Prospecting Methods		
Dept., work report	10966	
Leninism, see Communism.		
Lennon, Robert E., screening fish-con-		
trol chemicals	19721	
Lenses, corrective, filters, and struc-		
ture effects in empty visual		
field, studies	18856	
Lentils, dry, foreign agriculture cir-		
culars	3520	
Leonard, Benjamin F., ore deposits		
of St. Lawrence County magne-		
netite district, northwest Adi-		
rondacks, N.Y.	15947	
Leone, Lucile P., agricultural mi-		
grants and public health	5645	
Leone, Oliver Q., observations in de-		
velopment of titanium-refining		
cells	11338	
Lepidoptera, developing and diapaus-		
ing pupae, bioelectric activity		
of nervous system, USSR		
study	16141	
see also Gonionota melobaphes		
Walsingham — Microlepidop-		
tera—Moths—Stenomidae.		
LeRoux, E. F., geology and ground-		
water resources of Rock		
County, Wis.	2428	
LeRoy, L. W., smaller Foraminifera		
from late Tertiary of south-		
ern Okinawa	10645	
Lesage, M. A., tolerance to prolonged		
deep hypothermia	9978	
Lesions, see Brain.		
Leslie, Edward A.:		
basic data on economy of Ireland	863	
foreign trade regulations of—		
Ireland	14386	
United Kingdom	8821	
Lespedeza:		
annual, culture and use	11755	
insect species in herb stratum of		
sericea stand, AEC Savannah		
River project	1781	
Lesser, Arthur J.:		
accent on prevention through im-		
proved service	8143	
health of children of school age	19313	
lecture, May 10, 1963	197	
Lesser Antilles, see Antilles.		
Lesser Sunda Islands, sailing direc-		
tions	18841	
Letcher County, Ky., coals, carboniz-		
ing properties	9528	
Letilan fibers, biologically active		
polyvinyl alcohol, anti-bacte-		
rial activity, USSR study	8883	
Lett, Harold A., equal opportunity		
in housing	21367	
Letter services, duplicating and mail-		
ing service	3127	
Lettuce:		
prepackaging at shipping point	13591	
shrink-film-wrapped, effects of heat-		
tunnel temperatures	36	
Leucocytes:		
osmotic stability, in persons under		
occupational hazards, USSR		
study	2490	
Pelger's leucocytic anomaly, treat-		
ment	8941	
vertebrates, survival in intestines		
of blood-sucking insects and		
ticks, USSR study	9007	
Leukemia:		
health information	18900	
leukosis and radiation, USSR		
study	2888	
USSR studies	1164	
Leukosis, see Leukemia.		
Leung Chi King, relief	2027	
Le Van, Herbert P., manganese ex-		
traction studies using ferrous		
sulfate and pickle liquor	13128	
Levelometers, automatically main-		
tains super-cold liquids	9549	

Entry	Entry	Entry	
Levenson, Barbara, mental health in child health conference.....	17117	Leybold, Herbert A., fatigue life of aluminum alloys.....	16688
Levi, David W., thermal degradation, etc., of high polymers.....	4608	Lezberg, Erwin A., optical techniques for temperature and concentration measurements of combustion.....	18769
Levin, Harry L., unfunded private pension plans.....	13070	Li language, general features.....	4930
Levin, Sheldon G., fluid amplification, jet attachment distance as function of adjacent wall offset and angle.....	5628	Liability insurance, motor vehicle, Army regulations.....	13670
Levine, Louis, address, Aug. 5, 1964.....	15862	Liammari, J. J., international coal trade.....	3604
Levins, Phillip L., effect of electrophilic additives on radiolytic products of organic chain reactions.....	10033	Libbey, Charles E.: radio controlled dynamic spacecraft, deployment investigation of parawing recovery device, stalling and tumbling of radio-controlled parawing airplane model.....	1466 14852
Levinson, Edward, testimony, hearings.....	8456	Libby Dam and Reservoir, Kootenai River, construction authorized.....	2297
Levy, Elmer, relief.....	15471, 17702	Liberia: economy, basic data.....	12553
Levy, R. H., hypersonic magnetohydrodynamics with or without blunt body.....	16656	education and culture, exchange program, financing, agreement.....	15122
Lewins, Leon, basic data on economy of Hungary.....	10702	foreign trade regulations.....	18185
Lewis, Alan G.: calogold copepods (crustacea) of Hawaiian Islands.....	7602	military mission, agreement.....	15126
caligid copepod genus Dentigryps.....	9652	Port of Monrovia, transfer of title, agreement.....	15119
Lewis, Edward A., geometry and 1st-order error statistics for 3- and 4-station hyperbolic fixes on spherical earth.....	19166	Liberty: freedom and human rights, some next steps (address).....	1509
Lewis, John W., Chinese Communist Party leadership and succession to Mao Tse-Tung, appraisal of tensions.....	9802	freedom philosophy or enlightened dogmatism, political translations on Eastern Europe.....	20197
Lewis, Keith H., examination of foods for enteropathogenic and indicator bacteria, etc.....	13396	popular freedom documents available from Supt. of Documents.....	11545
Lewis, L. Earl, industry wage survey, meat products.....	13073	Libove, Abraham H., survival experience of radium cases.....	13701
Lewis, Marie J., relief.....	15666	Librarians: employment outlook.....	7378
Lewis, Mary E., effect of various modes of rehearsal on short-term recall.....	20705	examination announcements.....	1840, 21053
Lewis, Paul S., gasification of coal in presence of gamma rays.....	7442	Veterans Administration installations.....	8160
Lewis, Richard W.: nitrogen.....	18675	see also Medical record librarians.	
phosphate rock.....	18677	Libraries: automation—	
potash.....	18678	conference.....	20452
Lewis, Sidney T., urine evacuating system for use in full-pressure suits.....	8006	economic feasibility.....	5454
Lewis, Wayne C., board materials from wood residues.....	14314	routines in technical services (paper).....	7967
Lewis, William, compensating-bellows device as means of suppressing rocket pump inlet perturbations.....	16714	technical information retrieval, basic, general reference, cataloging, and book selection titles, list, book of the future, USSR study.....	15078 6608 14522
Lewis and Clark County, Mont., geology and mineral deposits.....	4793	Bureau of Ships Technical Library, thesaurus of descriptive terms and code book.....	20779
Lewis and Clark Lake, fish population studies.....	12427	colleges and universities— building needs.....	6829
Lewis and Clark Trail Commission: establish— law.....	21122	institutional statistics, 1962-63.....	4625
reports.....	17622, 17846	Federal Fire Council, fire safety reference library.....	4772
Lewis Research Center, Conference on New Technology, general information.....	21743	library education directory, 1962-63.....	4624
Lexicography, statistics and automation, USSR study.....	8850	library research in progress.....	8486-87, 14190
Lexington, Mass., flag of U.S., display, report.....	17516	library services and construction act, compilation.....	6570
Lexington, Mich.: harbor construction, engineer report— departmental edition.....	12348	new serial titles— alphabetical arrangement.....	3790
document edition.....	12028	classed subject arrangement.....	3789
Lexington Park Volunteer Fire Department, Inc., land conveyance by quitclaim deed.....	4524, 6140	3d edition, 1963 cumulation.....	14719
		personnel, national defense institutes, manual.....	21267
		public— appropriation, 1965, budget amendment.....	8255
		library services act, amend— law.....	6180
		report.....	2072



# INDEX 1964

Entry	Entry
Libraries—Continued	Library of Congress—Continued
school libraries—	Presidential papers—Continued
material for language programs,	law ----- 10142
selection and organization----- 6579	reports ----- 2036, 10394
public, statistics, 1962-63----- 21269	President's papers index series ----- 1392,
services for culturally deprived	13095, 18652
child ----- 601	press releases ----- 3901
standards, survey ----- 17927	Public law 480 project, accessions
statistics 1960-61, basic tables----- 17925	list—
State functions, 3d assembly, pro-	India ----- 3590
ceedings ----- 14720	Israel ----- 14717
see also names of libraries or	Middle East ----- 3721
places where located.	Pakistan ----- 3834
Library accessions:	publications—
Adjutant General's Office, Army	in print Mar. 1964 ----- 13091
Library ----- 4023	price list ----- 21841
Federal Fire Council, list ----- 3682	report, 1963—
foreign statistical publications----- 3525	departmental edition ----- 11304
India, American Libraries Book	document edition ----- 10178
Procurement Center, New	research facilities ----- 11308
Delhi ----- 3590	scientific information activities----- 11475
Interior Department ----- 3681	technical literature searching
Israel, American Libraries Book	service ----- 20853
Procurement Center, Tel-Aviv----- 14717	treasure maps and charts, list----- 14716
Labor Department ----- 4026	Libya:
Middle East, American Libraries	economy, basic data ----- 21086
Book Procurement Center, Tel-	ground water—
Aviv ----- 3721	Bengali area, Cyrenaica ----- 6823
National Archives ----- 20632	Sirte area, Tripolitania ----- 6824
Pakistan, American Libraries Book	sailing directions ----- 7632
Procurement Centers, Karachi	Licenses:
and Dacca ----- 3834	dental hygienists in D.C., waive
Reclamation Bureau, list ----- 4025	theoretical examination—
Russian, Library of Congress----- 3738	law ----- 17319
Library list, National Agricultural	report ----- 15786
Library ----- 1489, 3041, 9628, 14930	export, approved and reexporta-
Library of Congress:	tions authorized, list ----- 3449
accessions—	shelter licensing and marking, in-
India, American Libraries Book	structor's guide ----- 8154, 18794
Procurement Center, New	see also classes of persons to whom,
Delhi ----- 3590	or subjects for which, licenses
Israel, American Libraries Book	are issued.
Procurement Center, Tel-Aviv----- 14717	Lichens:
Middle East, American Libraries	Graphidaceae family in Mexico----- 5563
Book Procurement Center, Tel-	Parmelia subgenus Parmelia,
Aviv ----- 3721	studies ----- 18819
Pakistan, American Libraries	Lie detectors:
Book Procurement Centers, Karachi	polygraphs, use by Federal Govern-
and Dacca ----- 3834	ment—
Russian index ----- 3738	hearings ----- 10315, 14003, 15588
acquisitions, quarterly journal----- 3956	preliminary study ----- 8384
appropriations, 1964, legislative	Lieblein, Seymour, hypervelocity im-
law ----- 1976	pact damage characteristics in
report ----- 337	armored space radiator tubes----- 20599
appropriations, 1965, legislative	Liens, bankrupt estate priorities, re-
hearings ----- 8365, 15794	port ----- 14079
law ----- 17313	Life:
reports ----- 8334, 15557, 15699	nauka i zhizn, translations----- 16184
automation, survey ----- 5454	on molecular level, philosophical
calendar of events ----- 3298	aspects, USSR study ----- 1060
cataloging service bulletin ----- 2975	organization, general principles,
catalogs—	USSR study ----- 12800
books, subjects ----- 3677	outer space and life, USSR study----- 1269
dictionary, subject headings	processes, effects of radiation and
used ----- 4061	radioisotopes on, bibliography----- 11865
motion pictures and filmstrips----- 3678	see also Longevity.
music and phonorecords----- 14718, 18651	Life insurance:
national union catalogs ----- 3768	act of D.C., amend relative to
classification, additions and	capital stock insurance com-
changes ----- 3634	panies ----- 17414
collection of papers of—	law ----- 17751
Culbertson, William S., register----- 5458	report ----- 17751
Olmstead, Frederick ----- 1390	commercial, Army regulations re-
information bulletin ----- 3595	lating to solicitation on instal-
microfilming, specifications----- 16618	lations ----- 15263
National Poetry Festival, Oct. 22-	Federal employees group act of
24, 1962, proceedings ----- 13093	1954, amend—
National Referral Center for Sci-	extend coverage to certain legis-
ence and Technology, general	lative employees----- 408
information ----- 13094	hearing ----- 352
PL 480 newsletter ----- 3679	report ----- 352
Presidential papers, microfilming,	
remove authorization limita-	
tion—	

try  
142  
394  
92,  
552  
901  
  
590  
717  
721  
854  
  
091  
841  
  
304  
1178  
1308  
1475  
  
6853  
1716  
  
1086  
  
6823  
6824  
7632  
  
7819  
5786  
  
8449  
  
3794  
  
5563  
18810  
  
15588  
8384  
  
20509  
14079  
16184  
1060  
12800  
1269  
11865  
  
17414  
17751  
  
15263  
  
408  
352

Life insurance—Continued

Federal employees group act of 1954, amend—Continued	
extend coverage to temporary D.C. teachers—	
hearing	6522
law	21123
reports	17794, 19461
extend coverage to United States commissioners—	
law	17390
reports	12080, 17795
filing designation of beneficiary—	
hearing	6521
report	17790
group, coverage of full-time State and local government employees, Oct. 1962	20800
Grumman Aircraft Engineering Corporation group plan, improper disposition of refunds of premiums, GAO report—	4762
national service—	
laws liberalizing, important notice	21917
1964 regular dividend schedules—	11674
premium rates for total disability income provision providing disability protection to age 65, etc	20871
raising age limit to 65 for total disability income provision—	
law	13903
reports	4477, 14064
reopen program—	
law	21156
reports	19568, 21198
waiver of premiums upon becoming disabled prior to age 65—	
law	13912
reports	360, 14063
reserves, investments of individuals—	3618, 8546
veterans—	
excessive Federal contributions to trust funds, GAO report—	21336
hearings on miscellaneous bills—	12160
service-disabled, improper issuance, GAO review—	21337
Life insurance companies:	
District of Columbia—	
amend act eliminating duplication of recordkeeping, etc.—	
law	17317
report	15774
amend act relative to annual statements—	
law	1922
report	477
amend act relative to capital stock—	
law	17414
report	17751
exempt from act regulating loaning of money on securities—	
law	1920
report	476
farm mortgage lending experience—	8477, 12317, 19622
income taxation, amend act, hearing	15806
nonfarm mortgage investments, 1963	15889
taxation, correct certain inequities—	
law	17429
reports	12047, 17615, 17748
Life on other planets, transmission of information by extraterrestrial civilizations, USSR study	14648

Entry

Life preservers, emergency equipment for overwater operations, civil air regulations amendments—	12364, 12369, 12374
Life rafts:	
emergency equipment for overwater operations, civil air regulations amendments—	12364, 12369, 12374
new inflatable, nontippable raft—	9562
Life support systems:	
gravity-independent photosynthetic gas exchanger—	11784
internal environmental simulator for man-machine system—	5586, 15004
urine evacuating system for use in full-pressure suits—	8006
Life tables:	
abridged, comparison of 2 methods of constructing by reference to standard table—	7704
United States, 1900-59, guide—	1562
Lifesaving apparatus, <i>see</i> Life rafts.	
Lift (aircraft):	
interference effects of single and multiple round or slotted jets on model in transition—	16697
parawings as auxiliary lifting devices for supersonic airplane configuration, low-speed, longitudinal aerodynamic investigation—	14879
wing-body combination leading-edge sweep, effects of spanwise variation—	9596
Lifting:	
how-to-lift model, build and demonstrate this safety salesman—	5421
weight lifting provisions for women by State—	3193
Light:	
absolute photometry of night sky, zenith intensity of Haleakala, latitude N 20.7°, and at Fritz Peak latitude N 39.9°—	14939
candela as unit of luminous intensity, establish, law—	245
high luminance levels, visual recovery from brief exposures—	19177
luminescence—	
Atlantic Ocean, USSR study—	2619
physics, USSR studies—	12709
resonance, scattering at Lyman-alpha by atomic hydrogen cell—	13221
ruby laser, transmission through water—	5597
stimuli in visual analyzer of man, fusion thresholds, USSR study—	9220
survivor locator, civil air regulations, amendments—	12369, 12374
ultraviolet region, altitude variation of Rayleigh, aerosol, and ozone attenuating components—	19149
variable, bioclimatic cabinet for simulating, design and operation—	19051
<i>see also</i> Polarization (Light)—Reflection (Light).	
Light amplifiers, <i>see</i> Lasers.	
Light duty rescue course, instructor's guide—	6067
Light filters, color photography, selection of camera filters—	14934
Light lists, <i>see</i> Lights and lighting.	
Light projectors, photometry of projectors at National Bureau of Standards—	3049
Light traps, <i>see</i> Insect traps.	
Lighters, <i>see</i> Cargo carriers.	

# INDEX 1964

Entry	Entry
Lights and lighting:	Limnology:
airfield lighting, Navy design manual, changes-----	populations of simplest structure, analysis of production process, USSR study-----
Coast Guard lists-----	sockeye and related limnological and climatological investigations, Brooks Lake, Alaska, 1957, ecological studies-----
Atlantic and Gulf Coasts-----	Limstrom, G. A., forest planting practice in Central States-----
Atlantic Coast, local-----	Lin-Fu, Jane S.: histidinemia-----
Great Lakes-----	maple syrup urine disease-----
Mississippi River system-----	Lincoln, Abraham: 2d inaugural, joint committee to commemorate 100th anniversary, create-----
Pacific Coast and Pacific Islands, electric lighting fixtures, current industrial reports-----	law-----
fixtures, Federal item identification guides for supply cataloging-----	reports-----
supplement-----	statue for presentation to Mexico-----
Naval Oceanographic Office, lists-----	law-----
Baltic Sea, etc-----	reports-----
British Isles, etc-----	Lincoln, Nebr., root development of ponderosa pine transplants-----
Europe and Africa, west coasts, etc-----	Lincoln Hills, progress and profit, ideas for rural areas development-----
North America, east coast, etc-----	Lind, George, statistics of land-grant colleges and universities, 1962-----
North America, west coast, etc-----	Linden, Kurt J., sensitive vibration magnetometer-----
Norway, etc-----	Lindow, Herbert A.: basic data on economy of Colombia for U.S. products, Colombia-----
Pacific Ocean, western, etc-----	Lindquist, Clarence B., placement examinations in mathematics-----
point light source technique, device 2FH4 for flight simulator-----	Lindsay, James R., YAT-28E limited category 2 systems evaluation-----
United States standard for colors of signal lights-----	Lindsay, John V., testimony, hearings-----
variable light source with million-to-one intensity ratio-----	Lindsay, Renee, see Shin Sook (Renee) Whang-----
see also Beacons—Electric lamps—Electricity.	Line parameters and computed spectra for water vapor bands at 2.7μ-----
Lignite, technology and use, symposium, proceedings, Apr.-May 1963-----	Linear equations, see Equations.
see also Coal.	Linear ion accelerators, see Accelerators.
Lilies-of-the-valley, ecology and biology, USSR study-----	Linear programming: determining mine-production schedules-----
Lill, J. G., sugarbeet culture in North Central States-----	estimating maximum allowable timber yields-----
Lily-of-the-valley, see Lilies-of-the-valley.	regional analysis of production adjustment in major field crops, selecting inserted variable in simplex method, USSR study-----
Lim Myung Im, see Zehr, Michelle S.	Linear systems: dynamical, with bang-bang controller, synthesis technique-----
Lim Sam Soon, relief-----	multiple input, frequency response functions and coherence functions-----
Limbs, gunshot injuries of extremities, mechanism, USSR study-----	Lines, see Electric lines—Telephone lines.
see also Artificial limbs.	Lingala language, Foreign Service Institute, basic course-----
Lime: liming soils, aid to better farming-----	Linguistics, see Language and languages.
mineral industry survey, monthly minerals yearbook chapter-----	Link, Richard F., computer methods of fitting surfaces to assay and other data by regression analysis-----
response of alfalfa in acid soils of southeastern U.S.-----	Linsenmayer, L. R., addresses, remarks, etc., Nov. 8, 1963-----
Lime-soda sintering, hydrated calcium aluminates encountered-----	Linters, see Cotton.
Limestone: crushed, mining and beneficiating methods and costs in Madison County, Iowa-----	Linville Falls quadrangle, N.C., geology-----
crushed, operations, Watauga quarry, Watauga Stone Co., Carter County, Tenn.-----	Liothyronin, new Hungarian drug-----
explosives in limestone, comparative studies-----	Liozner, L. D., regeneration of lost organs-----
Guam, petrology-----	
hydrometallurgical recovery of manganese from manganiferous limestones-----	
mining methods and costs, Kimballton limestone mine, Standard and Cement Co., Giles County, Va-----	
Liming, see Lime.	

	Entry
Lipids:	
chemiluminescence, and rate of growth in Pacific salmon, USSR study	4977
excretion of lipid and lipid substances in human sweat	8045
fish, effects of ionizing radiation	19251
improved rapid method for determining total lipids in fish meal	19724
Lipp, Frank E., claim	19554
Lipper, Harold W., helium	14735
Lipsky, George A., Army area handbook, Sudan	19211
Lipson, S., cellular aluminum for use in energy dissipation systems	18719
Liquefied petroleum gas, safe use and storage on farm	9942
Liquid fluorine, <i>see</i> Fluorine	
Liquid fuels, Federal test method standard, change	17902
<i>see also</i> Fuel oil	
Liquid-level gages, integrated hot wire-stillwell system for liquid hydrogen, etc	1474
Liquid-level meter has no moving parts	13182
Liquid metals, <i>see</i> Metals	
Liquid nitrogen, <i>see</i> Nitrogen	
Liquid oxygen, <i>see</i> Oxygen	
Liquid switch is remotely operated by low dc voltage	13201
Liquidity (economics):	
balance of payments and international liquidity (remarks)	3175
new look at liquidity (remarks)	19707
Liquids:	
autophobic, on platinum, study by contact potential method	20709
behavior on various cords for seams of chemical and biological protective overgarments	11590
convective heat transfer to, influence of acoustical vibrations	8801
damping in right-circular cylindrical tanks, including effects of time-variant liquid depth, investigation, errata	3005
equilibrium free surface under low gravity and centrifugal forces	20598
flammable—	
physical properties, maritime safety data	18615
safe use and storage on farm	9942
flammable and combustible, safe handling, manual	10118
layer of uniform thickness spread over rigid circular cylinder subjected to lateral accelerations, stability criterion	18776
super-cold, level automatically maintained by levelometer	9549
undercooled, in cylindrical tubes, temperature distribution in crystallization	15974
weightless, ground tests, USSR study	7035
Liquors:	
alcohol education in institutions of higher learning	13280
distilled liquor industry, review of 1963, outlook for 1964	15299
distilled spirits—	
used in manufacture of nonbeverage products, drawback of tax	4846
wines, and beer, imported, refund of taxes—	
law	17398
reports	8817
intoxicating, code of Federal regulations	6689
<i>see also</i> Malt liquors	
List, Alfred G., carcinogenesis abstracts	3304

	Entry
List of OAR research efforts (LORE), project sequence	7990
Liston, Laurence L., road-user and property taxes on selected motor vehicles, 1964	7715
Liston, Sonny, boxing activities, investigation, hearings	14150
Lists, <i>see</i> subjects of lists	
Literacy, <i>see</i> Illiteracy	
Literature:	
civil defense training, list	15051
classical, classification, Library of Congress	9484
critique of literature on brazing, USSR study	18339
education profession, Educational Materials Laboratory, report	581
general, classification, Library of Congress	18650
nuclear science conference, availability	1780 8084
index	4300
recent developments in Soviet bloc, hearings	8381
Lithium:	
lightweight magnesium-lithium alloys, commercial and industrial applications	13184
magnesium-lithium alloys, development for structural applications	13154
minerals yearbook chapter	13111
thermionic emission ion sources for isotopic analysis	8061
Lithium fluoride, system magnesium-magnesium fluoride-germanium-lithium fluoride	9515
Lithium isotopes, analysis of lithium, thermionic emission ion sources	8061
Lithographic offset pressmen, <i>see</i> Pressmen	
Lithography, theory and practice	15970
Lithology, <i>see</i> Rocks	
Lithosliniae, <i>see</i> Moths	
Lithuania:	
crayfish, interspecific relations of	
Astacus astacus L. and A. Lepidodactylus Esch. in eastern lakes, USSR study	13004
merchandising and automating chemical industry	5094
Litigation, <i>see</i> Actions at law	
Little, Elbert L., jr., common trees of Puerto Rico and Virgin Islands	16945
Little, R. C., alkali sulfonates solubility and theory for solubility of soaps	13334
Little, R. P., electrical breakdown, initiation in vacuum	5599
Little, Silas:	
conditioning loblolly pine stands in eastern Maryland for regeneration	787
five-year effects from row thinning in loblolly pine plantations of eastern Maryland	5676
Little Colorado River:	
engineer's report—	
departmental edition	10491
document edition	10353
Little Cottonwood Canyon, Wasatch Mountains, Utah, glaciation	15950
Little League Baseball, Inc. incorporate—	
law	15395
reports	2052
Little River, S.C. to Rio Grande, Tex., light list	6112
Little Rock, Ark.:	
occupational wage survey	1380
population, special census	19303
Little strokes, hope through research	7586
Liu, Wai Chan Cheng, relief	244



# INDEX 1964

Entry	Entry	
Liver:	Load (mechanics)—Continued	
development, effect of cortisone on metabolism of ribonucleic acid and its nucleotides.....	bending tests of large-diameter stiffened cylinders susceptible to general instability.....	9589
hepatic diseases, drug treatment, NHI supported research grants.....	buckling of aeronautical structures, imperfections, main contributor to scatter.....	19000
microsome and reductase activity in young male rats, influence of X-irradiation on development.....	dynamic response of snow to high rates of loading.....	12346
resection, with use of alloplastic materials, USSR study.....	ground-wind, on axisymmetric launch vehicles.....	1455
surgery techniques, USSR study.....	gust loads in 1961 Rough Rider storms.....	11705
Livestock:	helicopter rotor-blade differential pressures, stresses, and motions, tabulation.....	9564
animal industry, publications, price list.....	ice load encountered by ship propeller blades, determination, USSR study.....	18336
automatic feeding equipment.....	ice mechanics circular plates on elastic, sealed foundations.....	8509
calculating expected production, USSR study.....	landing, rough - terrain - induced structural, analytical determination.....	7819
damage from radioactive fallout in event of nuclear war.....	prestressed rigid pavement on low strength subgrade, repetitive loading model tests.....	12352
farm production, etc., 1962-63.....	randomization and ground-air-ground cycles influence on fatigue life.....	21746
feed grain crop insurance program, general information.....	vibratory, shear stress measurements in situ of soils.....	8513
feed production, current industrial reports.....	Load lines, merchant and passenger vessels, regulations.....	221
feeding, fisheries management and fish by-products, USSR study.....	Loaders (mechanical):	
foot-and-mouth disease, foreign threat.....	rapid billet loader aids extrusion of refractory metals.....	13179
foreign agriculture circulars.....	Loading, see Unloading and lading.	
foreign crops and markets (periodical).....	Loam, see Soils.	
insecticide recommendations for 1964.....	Loan associations, see Federal savings and loan associations.	
inventory, 1964.....	Loans:	
livestock and meat production improvement, Rumania, review of government decrees.....	Alaska reconstruction of areas damaged by earthquakes—	
livestock and meat situation.....	hearing.....	14140
market news, weekly summary and statistics.....	law.....	17310
marketing competition, equalize, hearings.....	reports.....	13953, 14067, 15556
packers and stockyards act, as it applies to—	banks, borrowing short and long (remarks).....	19705
auction markets.....	commercial and industrial, changes, weekly report.....	3312
dealers.....	construction of college academic facilities, law.....	1933
producers.....	conventional loans.....	
regulatory establishments, stations, and officials.....	largest insured savings and loan associations mortgage interest rates, summary.....	3755
slaughter—	made in excess of 80 percent of property appraised by Federal savings and loan associations.....	3366
commercial monthly report.....	disaster—	
meat and lard production, etc., 1963.....	economic, consolidated FHA act, authorize hearing.....	15581
statistics, 1962, supplement, 1963.....	economic injury disaster loans for small firms—	
USSR—	natural disasters.....	21865
growth in communal raising.....	product disasters.....	21866
pest control urged.....	to restore or replace businesses and home through SBA.....	20785
stock breeding.....	Export-Import Bank of Washington, active loans and credits.....	645
western range and livestock report, monthly.....	farm labor, housing.....	15218
Western States, plants poisonous to, description, etc.....	farm ownership loans.....	9957
world summaries of statistics release date, announcement.....	Farmers Home Administration—	
your livestock claims, packers and stockyards act can help you recover losses.....	increase limitation, report.....	13949
see also Food for Livestock.	loans in brief.....	5842
Living conditions, see Cost and standard of living.....	Federal credit programs, study.....	8372
Llanos, Leon, relief.....	Federal reserve member bank loans.....	3716
Lloyd, Dallas, arms control and disarmament, studies in progress or recently completed.....	federally financed student loans, fellowships, career training program in higher education, directory.....	4493
LMRDA, see Labor-management reporting and disclosures act of 1959.		
Load (mechanics):		
air loads on man, studies.....		
aircraft shells, longitudinal transverse bending.....		

# JANUARY-DECEMBER

	Entry
Loans—Continued	
forest tracts, by national banks, liberalize restrictions—	
hearings—	6346, 12255
law—	13890
reports—	4466, 12226
forestry purposes—	15220
homeowners act of 1933, amend—	
hearings—	17870
reports—	4467, 6277
housing for—	
elderly, hearings—	2232
elderly in rural areas, insured loan program, extend—	
law—	13889
reports—	12091, 14058
farm labor, hearing—	2231
senior citizens in rural areas—	10503, 20932
senior citizens, program, information—	8191
land acquisition and development—	3367
lenders handbook, VA pamphlet, change—	1650
making effective ARA business loan application—	5928
national defense education act of 1958—	
extend and amend law—	
hearings—	17646
law—	21157
reports—	15530, 15732, 17575, 19483
student loans, NDEA and higher education (periodical)—	3782
national defense student loan program, increase authorization, etc.—	
hearings—	14151
report—	17804
optometry students, loan program, extend to—	
hearings—	15393
law—	21146
reports—	17547, 17760, 19459
real estate, by national banks, amend Federal reserve act as to limitations, hearings—	6346, 15802
Rural Electrification Administration—	
program, statistical report, 1962—	5675
program, statistical report, 1963—	16851
REA recreation loan policy, hearing—	387
savings and home financing—	
chart book—	12389
source book—	17973
Small Business Administration—	
business, need for better supervision and administration, GAO report—	6772
credit requirements, loan policies, etc—	20784
local development company loans, economic growth, job creation—	18940
student, cancel for physicians and dentists who practice in shortage areas, reports—	4533, 17582, 17609
urban mass transportation, additional assistance—	
law—	13913
report—	12057
veterans—	
direct, sale at prices determined to be reasonable—	
hearings—	4511
law—	17261
reports—	4470, 15696
guaranteed and direct, questions and answers—	5745
guaranteed or insured, extend maturity—	
hearing—	542
report—	2205
home-buying guide—	7832

	Entry
Loans—Continued	
see also Banks and banking—Federal savings and loan associations—Mortgage insurance—Mortgages.	
Loblolly pine, see Pine.	
Local board memoranda—	3690
Local Government, see Government.	
Local public agency letters—	3692
Local transit:	
mass transit systems, study feasibility of user taxes—	
law—	17412
reports—	15700, 17616
National Capital Region program, develop—	
hearings, supplement—	394
report—	2039
Location identifiers, airport, etc., handbook—	3693
Lockhart, R. W.:	
sodium mass transfer—	
corrosion sample data, etc.—	10027
test loop design—	5958
Lockheed Aircraft Corp., California Company, wage chronology, 1937-64—	21667
Lockheed Missiles & Space Co.:	
excessive relocation payments to employees transferred from one company location to another, Sunnyvale, Calif., Defense Dept. and NASA, GAO report—	12490
use of private executive rather than commercial aircraft, unwarranted charges, GAO report—	21345
Locking devices, simple mechanism combines positive locking and quick release features—	7488
Locks (hydraulic engineering):	
miter-type gates, operating forces on—	14213
Old River, La—	18714
walls and appurtenances, planning and design, manual, change—	12349
Lockwood, R. M., miniature valveless pulsejets—	16895
Lockwood, Vernard E., low-speed characteristics of transport 4-engine model with large bodies mounted above fuselage—	9591
Locomotion, man's self-locomotion in lunar environment, gravity-simulation technique—	9581
Locomotive Inspection Bureau, report, 1963—	4871
Locoweed, livestock poisoning in Western States, reducing losses—	20915
Lodgepole pine, see Pine.	
Loeb, Howard A., acute oral toxicity of chemicals force-fed to carp—	6729
Loess:	
duration of percolation from soil—	12458
Iowa, expansion properties, for lightweight aggregates—	9510
Loevinger, Lee, address, Nov. 1, 1963—	2311
Loewenstein, E. V., moire fringe measuring system for far infrared interferometric spectrometer—	4254
Log and chart, Public law 85-742, USDL maritime safety, program—	5422
Logan, William B., handicrafts and home business—	18943
Logan, William J. C., Chinese agricultural publications from Republic of China since 1947—	9628
Logan County, Kans., soil survey report—	20805
Logansport, Ind., consumer expenditures and income, 1961—	11272
Logging, see Lumbering.	

# INDEX 1964

Entry	Entry
Logic (symbolic and mathematical): automatic logical devices for medical monitoring, USSR study.....	10741
computer circuit will fit on single silicon chip.....	14809
digital elements provide additional functions from analog input.....	14822
microelectronic design, MRIR-PCM telemetry system, practical example.....	14856
see also Mathematics.	
Logic of systems, introduction of formal theory of structure.....	7989
Logical forms of crime classification, USSR.....	14452
Logical positivism, failure of neopositivist concept of scientific and theoretical knowledge, USSR study.....	1001
Logistics, see Military art and science—Naval art and science.	
Logs: grades, analysis technique for testing.....	2390
hardwood veneer, development of recommended grades.....	8673
oak, plant quarantine import requirements of foreign countries, addition.....	16938
Pacific Northwest stumpage and log supply quarterly report.....	3830
ponderosa and sugar pine, grading saw logs in trees, improved system, guide.....	14306
sugar maple veneer, grading for pith flecks.....	12459
western softwoods, diagramming guide.....	8633
see also Scale (logging).	
Lomax, Harvard, numerical analysis of flow properties about blunt bodies moving at supersonic speeds in equilibrium gas.....	18725
Lomax, Ill., railroad accident.....	10716
Lombard, David B., nuclear explosions, close-in shock studies.....	5079
Long Beach, Calif., occupational wage survey.....	16592
Long Island, hydrogeology of Nassau and Queens Counties.....	6816
Long Island Conference on Industrial Modernization proceedings, Apr. 16, 1964.....	13742
Long term care.....	20762
Long Valley, gravity study.....	6804
Longevity: and physiological old age, USSR study.....	19891
bibliography.....	11661
diet as factor in length of life of rat with aging.....	19080
latent effects of chronic irradiation of monkey.....	73
Longevity pay, see Salaries.	
Longitudinal stability, see Stability of aircraft.	
Longleaf pine, see Pine.	
Longshoremen: safety program, report, 1963.....	5422
workmen's compensation benefits provided under longshoremen's and harbor worker's compensation act, as extended.....	17930
Longview, Wash., port.....	15876
Look ahead (address).....	2318
Loop, Ethel R., relief.....	15659
Lopez, Armando E.: attitude stabilization of manned spacecraft by twin gyros, etc.....	20574
simulator studies of manual control of vehicle attitude using on-off reaction control system.....	1473
Lopez, Faye E. R., relief.....	6240, 12184
Loria, E. A., recrystallization of vanadium.....	21716
Lorilla, Hipolito M., relief.....	429
Los Alamos, N. Mex., geology and ground-water resources of area.....	19798
Los Angeles, Calif.: employment opportunities for the elderly, increase, hearings.....	10409
housing problems of the elderly, hearings.....	12246
occupational wage survey.....	16592
police-minority group relations, civil rights report.....	1839
principal electric facilities, map.....	677
Losee, J. E., Air Force maintenance technical data system study.....	51
Lost River and Valley, tin mine area, Alaska, geology.....	8752
Lotan, James E., regeneration of Lodgepole pine.....	14319
Lotspeich, Frederick B., minor elements in bedrock soil, etc., at outcrop of phosphoria formation Snowdrift Mountain.....	801
Lou, Kim, see Kim Lou.	
Loudoun County, Va.: commitment of persons of unsound mind found on Federal reservations to St. Elizabeths Hospital— law.....	17364
report.....	17742
Louisiana: and adjacent States, floods of Apr.-May 1958.....	2430
annual survey of manufacturers, 1962, standard metropolitan areas and large industrial counties.....	6031
climatic summary, 1951-60, decennial census.....	19025
climatological data.....	3329
coastal area, fishery products, wholesale dealers, lists.....	719, 18019
electric rate book.....	4706
epicormic branching in north Delta labor benefitted by economic expansion (remarks).....	18077
labor organizations, reporting, register.....	8185
landings, fish and shellfish.....	16573
minerals industry, minerals yearbook chapter.....	692
municipal waste facilities, 1962 inventory.....	3699, 17995
municipal water facilities.....	2985
precipitation data, hourly.....	3107
public assistance, federally aided programs, excessive financial participation, Welfare Administration, Health, Education, and Welfare Dept., GAO report.....	18912
public school finance program, 1962-63.....	3578
sugarcane culture for sugar production.....	13580
sulfur resources and production.....	20475
Louisville, Ky.: occupational wage survey.....	13067
principal electric facilities, map.....	674
Loup River and Valley, Nebraska, channel patterns and terraces.....	12510
Louvers, vinyl-coated glass fiber cloth, standard of trade.....	11430
Love, L. D., summer recreational use of selected national forest campgrounds in central Rocky Mountains.....	12480
Love waves, see Seismology.	
Lovelace, Uriel M., trajectory and large-amplitude motions of Scout vehicle during 4th-stage re-entry flight.....	13236
Low-rent housing, see Housing.	

# JANUARY-DECEMBER

	Entry
Lowell, Mass.:	
ground-water resources of area	10657
opportunities for economic development	19196
Lowenstern, Martha, labor in Peru	11274
Lower Colorado River Basin project, construct, etc., reports	17707-708
Lower Colorado River Land Use Advisory Committee, report	14364
Lower Klamath National Wildlife Refuge:	
administration—	
law	17425
reports	2093, 17595
Lower Pend D'Oreille Indians, see Kallispel Indians.	
Lower Teton division, see Teton Basin project.	
Loxahatchee National Wildlife Refuge, birds, list	6725
Loxodon, see Sharks.	
Lu, Hattie, relief	6385, 17480, 19375
Lu, Z. A., finite element solution for thin shells of revolution	14768
Lubbock, Tex., occupational wage survey	18633
Lubke, E. R., hydrogeology of Huntington-Smithtown area, Suffolk County, N.Y.	10655
Lubricants:	
aircraft oil analysis system for operational use in field, feasibility investigation	3172
bibliography	15833
coolant fluids in cutting metals and technique of their application	82
engine oils, radioisotopes evaluations applications	1777
Federal item identification guides for supply cataloging	12294
supplements	3475
Federal supply catalog—	
identification list, change	15829
management data list, change	4601, 14161, 15830
Federal test method standard, change	17992
gallium, useful bearing material in high-vacuum environment	13177
grease lubrication, bibliography	16891
high temperature, use of inorganic salts, investigation	9989
lead oxide ceramic makes excellent high-temperature lubricant	20555
lubricating oil, deceptive advertising and labeling of previously used oil, FTC trade regulations rule	15911
nonspreading oils, effect of polar-nonpolar additives on oil-spreading on solids	5603
oil-smeared models aid wind tunnel measurements by flow visualization	11373
organic, evaporation rates in vacuum	5517
spreadability, prevention	5604
X-15 power unit pinion gear wear and failure problem	20947
see also names of lubricants.	
Lubricating oil, see Lubricants.	
Lubrication:	
bibliography	15833
space environments requirements	4253
Lucas, Edwin L., lumber kicker for conveyorized cut-off saws	8637
Lucas, Robert C., recreational use of Quetico-Superior area	12476
Lucero, Frank N., portable aircraft arresting barrier	1732
Lucie, Lovorko, relief	2000, 6154, 6397
Lucien, Harold, X-irradiation of hydrazine, etc.	18778

	Entry
Luevano, Daniel M., nomination, hearing	14127
Luggage, see Baggage.	
Luke, Keung P., theoretical study of zero-field electron work function of metal immersed in gas, direct application to cesium thermionic diode	14886
Luke area, Ariz., geology and ground water of Maricopa County, Ariz.	14356
Lukefahr, M. J., diapause in pink bollworm	7952
Lumber:	
board materials from wood residues	14314
cargo, tariff filing requirement, exclude, hearing	4504
exports—	
1962	11882
1963	21021
Federal item identification guides for supply cataloging	12292
supplement	3473
imports—	
1962	11883
1963	21022
industry, mergers and economic concentration in Douglas-fir	14331
kicker for conveyorized cut-off saws	8637
overlays, old product in new dress	14311
plant quarantine import requirements of foreign countries, addition	16938
production and mill stocks, current industrial reports	19293
reshipments to Puerto Rico, Secretary of Commerce to suspend requirements for exclusive use of U.S. vessels, hearing	2235
slabs, edgings, and trims, utilization	12452
softwood standards, impact on small business, hearings	21214
value losses in southern hardwood lumber from degrade by insects	18085
see also Logs.	
Lumbering:	
characteristics of sample of logging residue in eastern Oregon	12464
fair labor standards act, applicability to forestry or logging operations	16913
logging for water quality in northern California	8662
logging operations, injuries and accident causes	1378
mixed-conifer stands, comparative seed-tree and selection harvesting costs	2377
tractor-logging in redwood, costs, etc.	8689
Luminance, see Light.	
Luminescence:	
chemiluminescence from atomic oxygen-nitric oxide reaction under upper atmospheric conditions	14780
solids, atom density measurements	9530
super-faint chemiluminescence of plant organisms, interrelationship to heat resistance	9009
thermoluminescence, bibliography	1773
thermoluminescent dosimeters on recoverable satellites	7652
ultraviolet luminescence of cells, USSR study	11225
see also Light.	



# INDEX 1964

Entry	Entry
Luminescent material: bacterioviridin, temperature dependence, and its state in photosynthetic bacteria, USSR study-----	5368
coatings as visual aids for night aircraft carrier landings-----	13328
Luminosity, contamination-induced ahead of blunt body in Langley hotshot tunnel, study-----	18775
Lummi Reservation, assessing Indian trust and restricted lands within diking project through district under State laws, report-----	17840
Lummins, Robert C., frequency response of nucleate pool boiling heat transfer-----	19238
Lumumba, Patrice, interview with Tshombe on death of-----	9121
Lunar: Note.—For other subjects beginning Lunar, see Moon. Lunar astronomy, see Astronomy. Lunar charts and mosaic series, U.S.A.F.-----	1740, 20968
Lunar science: lunar surface studies, bibliography, bibliography-----	14798 5872
Lunar trajectories, see Trajectories.	
Lund, Keith K., relief-----	8280, 15630
Lundberg, Horace W., school social work-----	10472
Lundes, Anders, trends in marriages, births and populations-----	2436
Lundquist, Arthur L., three methods for loading out produce in warehouses-----	11773
Lundquist, Raynard V.: aluminum extraction of calcium aluminates in water, etc-----	20504
hydrated calcium aluminates encountered in lime-soda sinter process-----	5482
solubility characteristics of sodium aluminate-----	18688
Lungs: cancer, health information-----	18903
device induces lungs to maintain known constant pressure-----	14825
surgery, USSR translations-----	976
Lupine, livestock poisoning in Western States, reducing losses-----	20915
Lusby, Gregg C., hydrologic and biotic characteristics of grazed and ungrazed watersheds, Badger Wash Basin-----	4804
Luskin, Sheldon H., employment requirements and changing occupational structure in civil aviation-----	16591
Luther, Larry, economy of Thailand-----	6855
Luther, Marjorie J., cancer in sub-human primates-----	18916
Lutz, H. J., Sitka spruce planted in 1805 at Unalaska Island by Russians-----	2355
Luxembourg: double taxation, convention ratification, report-----	15615
education, exchange program financing, agreement-----	11644
foreign trade regulations-----	8830
Luzic, Josip, see Lucic, Lovorko.	
Luzon Island, hydrogeologic reconnaissance-----	15955
Lyford, Carrie A., Ojibwa crafts-----	2439
Lyman, C. P.: effect of low temperature on isolated hearts of Citellus leucurus, etc-----	4245
hibernation in mammals and birds-----	4246
Lyman, Frederic A., seeding and ion slip on electron heating in magnetohydrodynamic generator-----	7523
Lyman, P. T., temperature distribution and thermal stresses-----	13436
Lyman series, resonance, scattering at Lyman-alpha by atomic hydrogen cell-----	13221
Lymphocytes, recirculation-----	19141
Lymphogranuloma venereum, management in general practice-----	16840
Lyn Fong Y. Hom, see Woo You Lyn.	
Lynch, John M.: monthly cost standards for basic needs used by States for specified types of old-age assistance cases etc-----	10496
two-dimensional flux and criticality calculations for Plum Brook reactor-----	21767
Lynch, Norris A., market for costume jewelry in West Germany-----	144
Lynn, Ind., accident-----	14405
Lynnhaven Inlet and Bay, project authorization, modify, report-----	19470
Lyon, A. W., remarks, May 15, 1964-----	10130
Lyon, R. H., review of recent research on noise and structural vibration-----	11398
Lyon, W. L., measurement of oxygen to metal ratio in solid solutions of uranium and plutonium dioxides-----	8054
Lyon County, Minn., geology and occurrence of ground water-----	818
Lyons, John B., distribution of thorium and uranium in 3 early Paleozoic plutonic series of New Hampshire-----	21350
Lyons, John C., welded electronic module fabrication-----	14862
Lyons, Thomas C., jr., representative speeches of Douglas MacArthur-----	19526
Lyophilized tendon homotransplantation in flexor digitorum profundus lesion at carpal articulation level, USSR-----	21445
Lysimeters, soil-block, water yield and soil loss-----	6751
M	
M.R.L., see Aerospace Medical Research Laboratories.	
MA SP series-----	2977, 7425, 13097, 14723-724, 18654-655, 20457-460.
Mable, C. P., petrographic study and classification of western phosphate ores-----	14750
Macaca mulatta, see Monkeys.	
Macacos quadrangle, Brazil, geology-----	10638
Macao, travel information for Chinese going to Communist China-----	9319
Macaro, Carmela, relief-----	15433
Macaroni, recipes, Army technical manual-----	13682
MacArthur, Douglas: representative speeches, compilation-----	19526
tribute, DOD pamphlet-----	8020
MacArthur, Jean B.: management aids for small manufacturers, annual-----	18941
small marketers aids-----	20792
McBrien, Thomas H., remarks, June 24, 1964-----	14682
McCain, John S., new 4-ocean challenge-----	15015
McCallum, Gordon E., Great Lakes development program, review and prospects-----	13398

	Entry		Entry
McCalmont, J. R., rope on farm.....	20916	MacDonald, Gordon J. F.: inner planets, strength, etc.....	9616
McCammon, Bert C., Jr., discount re- tailing.....	11605	spectrum of hydromagnetic waves in exosphere.....	7554
McCamy, C. S., inspection of processed photographic record films for aging blemishes.....	7575	MacDonald, Lois, controverted cases, New York State workmen's compensation.....	16909
McCarren, E. F., chemical quality of surface water, West Branch Susquehanna River basin.....	4824	MacDonald, Scot, evolution of aircraft carriers.....	21820
McCarthy, Leo T., Jr., quality of Del- aware River water at Trenton, N.J.....	19803	McDonald, William J., community planning for accident coverage.....	9711
McCarty, Carol L., outpatient psychi- atric clinics, 1961.....	13282	McDonough, John R., cardiovascular disease field study in Evans County, Ga.....	11551
McCarty, John L., penetrometers to study physical properties of lunar and planetary surfaces.....	18748	McDougal, Robert B., mineral indus- try of Oklahoma.....	2987
McCawley, Frank X., tungsten, prepara- tion of thick coatings.....	13130	McElman, John A., flutter of curved and flat sandwich panels sub- jected to supersonic flow.....	11388
McCloud, John L., III, nonarticu- lated helicopter rotor tests.....	16703	McElroy, Robert C.: labor used to produce field crops, estimates by States.....	9965
McCollum, Morris J., salt-water en- croachment to major aquifer zones, Savannah area, Ga. and S.C.....	19792	pecan production and marketing.....	17900
McCone County, Mont., geology of Fort Peck area.....	8767	McFadden, E. C., remarks, June 23, 1964.....	13035
McCord, Wallace R., lithology and reservoir properties of Big Lime, etc., horizons, Spruce Creek oilfield, W. Va.....	1444	McGary, J. W., oceanographic observa- tions, North Atlantic Ocean station Delta 44° N, 41° W.....	13815
McCormack, C. F., creating, organiz- ing, and reporting highway needs studies.....	5670	McGaubey, P. H., causes and preven- tion of failure of septic-tank percolation systems.....	14240
McCormack, George R.: injuries and accident causes in log- ging operations.....	1373	McGee, Gale W.: personnel administration, etc. in AID.....	4520
system magnesio-magnesium fluo- ride-germanium-lithium fluoride- work injuries and work-injury rates in highway and street construc- tion industry, 1961.....	9515	print as Senate document, report.....	4538
McCormack, John W., enology deliv- ered Nov. 24, 1963.....	2960	McGill, John T., urban geology.....	6802
McCormack, Robert W., impact flash at low ambient pressure.....	2132	MacGowan, C. F., remarks, Oct. 31, 1964.....	21369
McCormick, John A., coast pilot man- ual.....	7548	McGrath, R. G., Carolinas Virginia tube reactor, large plant study.....	112
McCoy, C. Jr., magnetic digital re- cording system for field use.....	15363	McGrath, Alaska, ground temperature observations.....	17939
McCoy, E. E., Jr., instruments for measuring pore pressures in concrete.....	13336	McGregor, E. A., publications on fish parasites and diseases, 330 B.C.-A.D. 1923.....	8621
McCracken, Curtis W., dust bombard- ment on lunar surface.....	19665	McGrew, Gordon W., relief.....	15465, 17696, 19383
McCracken, Earl C., home freezers, their selection and use.....	3033	McGuinness, J. L., techniques for fit- ting frequency distributions to hydrologic data.....	9931
McCracken, Frank L., Fortran pro- gram for analysis of ellipsoidal measurements, etc. from thin films.....	19075	McGuire, E. L., vertical structure of 3 dry lines, etc.....	11698
McCulloch, Frank W.: addresses, etc.....	13277	McGuire, J. E.: high resistance Mueller bridge, type G-3.....	13353
Apr. 25, 1964.....	11455	six-dial universal ratio set.....	13352
May 27, 1964.....	13291	Mach numbers: aerodynamic heating rates to bodies of arbitrary shape, measuring, with results for Mach 7.....	18773
June 13, 1964.....	13293	hypersonic, longitudinal character- istics of configurations in conical and contoured nozzles.....	20612
Aug. 11, 1964.....	16754	Machine accountants, see Accountants. Machine operators, Federal examina- tion, what it is and how given.....	1845
MacCutcheon, Edward M.: remarks.....		Machine shops, job type, bibliog- raphy.....	11606
Sept. 17, 1964.....	18654	Machine tools: Italy's industry and market poten- tial for U.S. specialized tools.....	12551
Oct. 17, 1964.....	20459	metal-cutting, actual service life of stock, statistical determina- tion, USSR study.....	10997
McDermott, Edward A., address, Sept. 16, 1963.....	12329	numerical etc., program controls, current industrial reports, 164.....	17096
McDonald, David L., nomination, hearings.....	521	setting of angles on surfaces speeded by magnetic protractor.....	13160
McDonald, Francis R., obtaining ul- traviolet and visible spectra of insoluble materials, etc.....	11342	Machine translations, see Translating machines.....	
McDonald, Frank B., solar proton manual.....	9615		
Macdonald, Gordon A., Hawaiian vol- canoes during 1955.....	4779		

# INDEX 1964

Entry	Entry
Machinery:	
chemical machine building, USSR	
industrial development, trans-	
lations -----	1068
1204, 2646, 2865, 2911, 4947,	
5125, 7155, 9018, 10752, 11242,	
16111, 18210, 19889, 21435.	
economics of machine building, or-	
ganization and planning of en-	
terprises, USSR study -----	18580
Hungarian Ministry of Metallurgy	
and Machine Industry, organi-	
zation and operational code -----	16538
imports into Yugoslavia -----	5186
industrial machinery repairmen, em-	
ployment outlook -----	9435
industries, benefit of specialization,	
USSR study -----	6906
machine building—	
abstracts pertaining to Com-	
munist China in Soviet jour-	
nals -----	2513
East European industry, ad-	
vanced technology, transla-	
tions -----	2725
economic efficiency, evaluating	
new designs of equipment,	
USSR study -----	9062
industry bonus system, USSR	
study -----	6940
mechanization, etc., of produc-	
tion, USSR study -----	10902
planning and calculation of scien-	
tific research work, USSR	
study -----	12950
standardization, normalization	
and unification, determining	
technical-economic efficiency	
USSR study -----	4973
manufacturing, industry wage sur-	
vey -----	9468
measures to improve quality of ma-	
chines and equipment, USSR	
study -----	16563
mirror device aligns machine sur-	
face perpendicular to sight	
lines -----	13185
power, USSR industrial develop-	
ment, translations -----	1085
2583, 5089, 7091, 18555,	
21437 -----	21437
selected, and equipment, trade of	
United States, Western Europe,	
Canada, and Japan, 1961-62 -----	14393
Soviet agricultural workers urged	
to make full use of mechanized	
equipment and increase pro-	
ductivity -----	21421
Soviet ideas on interrelationship	
of people and machines -----	10850
special industry, Federal item iden-	
tification guides for supply	
cataloging -----	12296
supplements -----	3477
USSR industrial development,	
translations -----	997
1022, 1236, 2511, 2541, 2871,	
2922, 5086, 6906, 6924, 7108,	
8923, 9148, 9213, 11068, 12603,	
12615, 13002, 16017, 16041,	
16289, 16310, 16367, 16509,	
18211, 18509, 18538, 20288,	
20377, 21426, 21460, 21623	
see also names or types of machin-	
ery, e.g. Woodworking machin-	
ery—also subjects for which	
machinery is used.	
Machines, see Machinery.	
Machining:	
metals by electroerosion -----	8007
metals, X-ray diffraction analysis	
of stresses appearing, USSR	
study -----	2674
occupations, employment outlook -----	7388
Machinists, mate, 1 & C, Navy train-	
ing course -----	20695
see also Aviation machinists.	
Machisak, John C., injury experience	
in nonmetal industries except	
stone and coal -----	1402
McIlhenny, Loyce J., careers in atomic	
energy, planning for scientific	
& technical professions -----	137
McIntyre, Walter, simulation of heli-	
copter and V/STOL aircraft -----	15005
McIver, Robert G., cardiorespiratory	
responses of dogs to compres-	
sion therapy following decom-	
pression sickness -----	5904
Mack, Frederick K., geology and hy-	
drology of West Milton area	
Saratoga County, N.Y. -----	12524
Mackay Glacier area, coal deposits -----	2995
McKee, K. H., overlay test track,	
Sharonville, Ohio -----	4670
McKee, Lynne G., canning, can-drain-	
age device to aid sample in-	
spection -----	6709
McKee, Richard C., financing graduate	
education -----	14184
McKee, Robert E., General Contrac-	
tor, Inc., relief -----	2014
-----	6404, 21104
Mackel, Don C., field procedures for	
bacteriological studies of diar-	
rheal diseases -----	21848
McKenzie, Mary A., proceedings of	
3d assembly on library func-	
tions of States -----	14720
MacKenzie, Vernon G., address, Oct.	
7, 1963 -----	5656
Mackerel, firms canning, list -----	742
MacKevett, E. M., Jr., geology—	
and ore deposits of Bokan Moun-	
tain uranium-thorium area,	
southeastern Alaska -----	6798
North Bradfield River, iron pros-	
pect of Southeastern Alaska -----	2414
Sumdum copper-zinc prospect,	
southeastern Alaska -----	18101
Mackey, Wilfred G., T-39A category	
2 performance test -----	19135
Mackie, Robert R., simulation require-	
ments for sonar operator train-	
ers -----	16798
Mackie, Romaine P.:	
special education personnel in State	
education departments -----	4646
statistics of special education for	
exceptional children and youth,	
1957-58 -----	2268
Mackinac Island State Park, park-	
lands, if used for airport pur-	
poses, possible reversion to	
U.S., opinion of Attorney Gen-	
eral -----	20423
McKinley, William, papers, index -----	1392
McKinney, K., thermal shock studies	
of ceramic materials -----	13338
McKinney, Royce L., stability char-	
acteristic of launch vehicle's	
2 final stages -----	9586
McKinney, Tex.:	
sewage treatment plant, transfer	
to -----	17290
law -----	10279, 15755
transfer land to—	
law -----	17297
reports -----	15754, 21186
McKinney Bayou:	
flood control, engineer report—	
departmental edition -----	15869
document edition -----	15414
Mackintosh, Helen K., how children	
learn to read -----	21206
McKoy-Helgerson Co., relief -----	15470

# JANUARY-DECEMBER

	Entry
McLaughlin, Milton D., pilot evaluation of dynamic stability characteristics of supersonic transport in cruising flight.....	18764
MacLay, Donald M., basic data on economy of Dahomey.....	10701
McLendon, Verda L., removing stains from fabrics, home methods.....	11761
McLeod, William N., Jr., testimony hearings.....	6526
McMahon, Charles J., Jr., micromechanisms of cleavage fracture in polycrystalline iron.....	13437
MacMillan, Robert T., sodium and sodium compounds, minerals yearbook chapter.....	16647
McMillan, William M., nomination hearing.....	6524
McMullen Valley, geology and ground-water resources.....	4811
McMurdie, Howard F., research on crystal growth, etc., at NBS.....	21787
McMurray, Joseph P.: addresses, etc.....	
Dec. 12, 1963.....	2318
Jan. 21, 1964.....	4689
Mar. 2, 1964.....	6631
Mar. 23, 1964.....	8547
Apr. 2, 1964.....	8543
May 4, 1964.....	10520
May 9, 1964.....	10519
July 13, 1964.....	14239
Oct. 16, 1964.....	19682
Oct. 21, 1964.....	19684
McNamar, Lawrence F.: T-37C Category 2 performance test.....	4234
T-38A Category 2 performance test.....	1731
McNamara, Mary L., relief of estate.....	6423
McNary Dam: fish passage report.....	
1962.....	613
1963.....	17936
McNeely, Richard L., development of John N. Cobb, pelagic trawl, progress report.....	4730
McNeely, Robert F.: occupational wage survey.....	
Lubbock, Tex.....	18633
Raleigh, N.C.....	21672
McNeill, Ethel, sanitation in home laundering.....	7923, 16954
MacNeil, F. Stearns, Eocene megafossils from Ishigaki-shima, Ryukyu-retto.....	18128
McNeill, William J., success of pink salmon spawning relative to size of spawning bed materials.....	10572
McNeill, Walter E., piloted simulated study of loss of altitude by jet transport in go-around from instrument-landing approach.....	1471
McNitt, Harold A., basic data on economy of Finland.....	8826
MacNulty, B., evaluation of freeze-dehydrated beefsteaks for Navy use.....	11652
McNulty, Donald J.: occupational wage survey.....	
Cincinnati, Ohio-Ky.....	14700
Columbus, Ohio.....	7414
Louisville, Ky.-Ind.....	13067
Muskegon - Muskegon Heights, Mich.....	16603
McQuaig, James A., relief.....	6435, 8205
McQueen, I. S., development of hand portable rainfall-simulator infiltrometer.....	8761
McRae, Edith A., relief.....	15452, 17192
McRee, Donald I., air injection through porous surface, etc., effect on skin friction.....	18757

	Entry
McReynolds, Jane, airman qualifying examination, use to predict completion of basic training.....	13635
Macromolecules, see Molecules.	
Macskaylo, Michael, visible radiation damage effects of 40-Mev alpha particles on sodium chloride crystals.....	13243
Macy, John W., Jr., address, Mar. 18, 1964.....	11930
Madagascar, see Malagasy Republic.	
Madden, Joseph M.: effect of sorting procedure on accuracy of ordinal ranking.....	7994
identification of job requirement factors by use of simulated job descriptions.....	17002
worker and supervisor agreement concerning worker's job description.....	15232
Maddux, James T., relief, veto.....	421
Madelros, Leonor, see de Medeiros, Lenor do Rozario.	
Madison County, Iowa, crushed limestone operations, mining, beneficiating methods and costs.....	5473
Maeda, Kaichi: acoustic heating of polar night mesosphere.....	1456
heating of polar upper atmosphere.....	7553
infrasonic waves from auroral zone.....	13216
Maestrichtian age, see Cretaceous period.	
Magazines, see Periodicals.	
Maggie Canyon, manganese ore deposit, Artillery Mountain region, Mohave County, Ariz., estimated cost of exploitation.....	13115
Maggio, Pietro, relief.....	428
Maghreb, leadership, 2d and 3d generation elites.....	9804
Maglieri, Domenic J.: lateral-spread sonic-boom ground-pressure measurements from airplanes, etc.....	1461
sonic booms from aircraft in maneuvers.....	16691
Magma, Mongolia, deposits, geographical distribution.....	14528
Magnesia, see Magnesium oxide.	
Magnesium: alloys.....	
high temperature processing, USSR study.....	14410
wrought products, tolerances.....	4724
compounds, minerals yearbook chapter.....	20484
industry, review of 1963, outlook for 1964.....	6017
intermetallic compounds in magnesium-rich alloys.....	15682
lithium alloys.....	
development for structural applications.....	18154
lightweight, commercial and industrial applications.....	13184
mill products, current industrial reports.....	6044
minerals yearbook chapter.....	14740
primary, quarterly report.....	5935
products, preparation for shipment and storage, military standard.....	562
Magnesium fluoride, system magnesium-magnesium fluoride-germanium-lithium fluoride.....	9515
Magnesium oxide: phase diagram for system magnesium oxide-vanadium pentoxide.....	18861
system magnesium-magnesium fluoride-germanium-lithium fluoride.....	9515



# INDEX 1964

Entry	Entry
Magness, J. R., establishing, etc., young apple orchards.....	15208
Magnetic amplifiers, <i>see</i> Amplifiers.	
Magnetic cores, <i>see</i> Cores (magnetic).	
Magnetic fields:	
anisotropic effects in helically wound superconducting solenoids.....	3031
axial and radial of finite-length solenoids.....	7559
axial, instability of positive column.....	16731
azimuthal, of thick, finite-length, helical solenoid.....	14895
calculation.....	18745
constant, effect on conditioned reflexes in sea fish.....	3040
deceleration and energy conversions of plasma expanding in vacuum in magnetic field.....	16733
earth parameters, equatorial loci.....	11799
earth, Soviet research.....	895
earth's magnetic field on South Pole traverse, results of measurements, 1962-63.....	17148
excitation of electrostatic oscillations.....	13698
external, interaction of expanding cylindrical plasma column.....	20626
formation of conditioned reflex response in fish.....	5533
gradient in solar photosphere, determination.....	7564
homogeneous, 3 and 4 coil systems.....	7511
intense, shaped superconductor cylinder retains.....	13169
interplanetary, simple model.....	18745-746
kinetic equations for plasma including radiation, solution.....	13699
LF, VLF, ELF radio wave fields in space between ionosphere and terrestrial sphere.....	20639
longitudinal, calculating motion of gas between cylinders.....	20628
magnetic field from finite thin cone by use of Legendre polynomials.....	16708
magnetotelluric investigations in Georgia, USSR.....	14430
satellites in circular orbits, fields encountered.....	7501
spinning body, magnetically-supported, theoretical and experimental study.....	20529
strength, nuclear meter for measuring, description.....	7184
structure in active region of sun.....	5532
thick solenoid fields, superposition calculation from semi-infinite solenoid tables.....	20616
transverse, liquid metals, interaction of one-dimensional free-surface waves.....	13249
underwater detection based on use of magnetic and electrical phenomena, USSR study.....	7267
world magnetic survey, methods, results expected, etc.....	7518
Magnetic hourly values, HV series.....	1848-49
Magnetic materials:	
demagnetizing factors for oblate spheroids used in ferrimagnetic resonance measurements.....	18809
ferrimagnetic, calculation of magnetization vs. temperature curves.....	5595
saturation magnetization of ferrimagnetic materials, on use of magnetostatic modes for measuring.....	9973
thin film, survey.....	20642
Magnetic measurements, magnetic field intensity meter, description.....	7184
Magnetic protractors, <i>see</i> Protractors.	
Magnetic recording, digital system for field use.....	13336
Magnetic resonance:	
electron paramagnetic resonance method in biochemistry, USSR study.....	18362
ferrimagnetic resonance relations for magnetocrystalline anisotropy in cubic crystals.....	15243
measurements, demagnetizing factors for oblate spheroids used.....	18809
spectra, on nuclei of F19 fluorophosphates and fluorophosphonates, chemical displacements, USSR study.....	20205
Magnetic separators, magnetization delay in separation of minerals.....	9527
Magnetic storms, geomagnetic, correlation with ionospheric perturbations and solar flares, observed by probing.....	16995
Magnetic surveys:	
anomaly of possible economic significance in southeastern Minnesota.....	8762
Soviet progress in magneto-telluric methods.....	7324
world magnetic survey, methods, results expected, etc.....	7518
Magnetic tape, M-2 computer, tape-drive unit, USSR study.....	20025
Magnetic waves, traveling, coil-system design parameters for constant-velocity plasma-engine, analytical investigation.....	13228
Magnetism:	
electron paramagnetic resonance spectra of amino acids and proteins under gamma radiation and light, USSR study.....	9257
magnetic and gravity data in Copper River Basin, Alaska, geologic interpretation.....	21352
magneto-acoustic information storage system, research.....	13142
paramagnetic properties of chlorophyll and its analogs, USSR study.....	21402
susceptibility, linear correlation with chemical composition of minerals.....	7456
<i>see also</i> Magnetograms—Terrestrial magnetism—also headings beginning Magnetic.	
Magnetite:	
artificial concentrates, experimental upgrading by flotation.....	7433
experimental conversion of hematite with solid reductants.....	5485
ore deposits, St. Lawrence County district, northwest Adirondacks, N.Y.....	15947
Magnetization:	
delay in separation of minerals.....	9527
demagnetizing factors for oblate spheroids used in ferrimagnetic resonance measurements.....	18809
heterogeneous, of rock, USSR study.....	10932
saturation—	
dependence of anisotropy constant of nickel, USSR study.....	930
ferrimagnetic materials, on use of magnetostatic modes for measuring.....	9973
Magnetograms, MHV series.....	4402-4, 6104, 10115-116, 11958, 17149, 19341.
Magnetohydrodynamic generators, electron heating, effect of seeding and ion slip.....	7523
Magnetohydrodynamics:	
flow of electrically conductive fluid in plane magnetohydrodynamic channel.....	20630

	Entry
Magnetohydrodynamics—Continued	
hydrodynamic wave tube.....	1738
hydromagnetics and plasma physics.....	9989
hypersonic, with or without blunt body.....	16656
spectrum of hydromagnetic waves in exosphere.....	7554
three-body collisional recombination of cesium seed ions and electrons in high-density plasmas with argon carrier gas.....	21752
whistler-hydromagnetic extension of magneto-ionic theory.....	5874
Magneto-ionic theory, whistler-hydromagnetic extension.....	5874
Magnetometers:	
flux-gate, reduction of fold-over errors.....	21758
hall effect devices tested for cryogenic applications.....	11402
sensitive vibration instrument.....	7963
studying rare metal carbonatite masses, USSR study.....	18294
use to determine angular motion of spinning model in regular precession.....	11411
Magnetostatics, modes for measuring saturation magnetization of ferrimagnetic materials.....	9973
Magnetotelluric investigations in Georgia, USSR.....	14430
Magneto-telluric methods, see Magnetic surveys.	
Magnetotelluric micropulsations, see Micropulsations.	
Mah, Alla D.:	
heat of formation of aluminum carbide.....	11322
heats of combustion and formation of carbides of tungsten and molybdenum.....	5484
heats of formation of zirconium carbide and hafnium carbide.....	18700
Mahar, Mary H., statistics of public school libraries, 1960-61.....	17925
Maher, James F., jr., YLR99-RM-1 rocket engine operating experience in X-15 aircraft.....	14899
Mahogany, prohibit use of term for woods not mahogany, hearings.....	6364
Maida, Giuseppe, and family, relief.....	453, 1883
Mail carriers:	
city delivery, uneconomical scheduling by Post Office Dept., GAO report.....	6784
rural—	
employment-management cooperation (address).....	16813
instructions to applicants for examinations.....	21058
procedures for appointment.....	10339
Mail matter:	
carrying and handling, cost ascertainment report, 1963.....	11537
1st class, unnecessary costs incurred by Post Office Dept. in transporting by air, GAO report.....	12497
fraud and mailability, enforcement action, monthly release.....	3536
fraud, how postal inspection service protects you.....	20731
obscene matter sent through mail, protect postal patrons—	
hearings.....	2118, 10340
report.....	13938
see also International postal service—Periodicals.	

	Entry
Mail-order business:	
firearms, interstate traffic, juvenile delinquency investigation, report.....	21231
interstate land sales, hearings.....	19586, 21237
mail order insurance industry guides.....	12411
Mail sorters, Federal, job performance by age.....	9477
Mailing services, see Letter services.	
Malls, see International postal service.	
Maine:	
annual survey of manufactures, 1962, standard metropolitan statistical areas, and large industrial counties, statistics.....	4342
climatic summary 1951-60, decennial census.....	21920
electric rate book.....	668, 21306
fishery products, wholesale dealers, list.....	701, 18002
floods, magnitude and frequency.....	21359
herring, exploratory fishing.....	10571
Hovey Group of early Paleozoic rocks.....	19779
labor organizations, reporting, register.....	16570
landings, fish and shellfish—	
annual summary by months, 1963.....	10551
by county, gear, and subarea, annual summary, 1963.....	12415
monthly.....	3701
mineral industry, minerals yearbook chapter.....	20489
municipal waste facilities.....	3101
municipal water facilities.....	18906
potato futures.....	10134
public school finance program, 1962-63.....	4638
reconnaissance of ground-water conditions.....	825
retirement system, separate treatment for teachers and other employees for social security purposes—	
law.....	13898
reports.....	8308, 12232
sharks, anglers' guide.....	10557
women—	
labor laws, summary.....	19034
legal status.....	15173
workers, 1960.....	15178
Maintenance:	
aerospace maintenance safety.....	3216
Air Force technical data system study.....	51
air navigation and traffic control, facility outage and equipment failure report, FAA handbook.....	12380
aircraft maintenance, preventive maintenance, etc., Federal aviation regulations.....	14228
airframes, AF manual.....	11791
Army National Guard, controlled cannibalization for repair parts.....	11443
building maintenance—	
galley equipment at naval shore activities.....	7868
roofing, Navy manual.....	7869
structures at naval shore activities.....	5772
clothing, specialist, suggested training program.....	15839
engineer equipment, preventive maintenance indicators for commanders, Marine Corps manual.....	5460
FAA facilities, cost accounting handbook.....	649

# INDEX 1964

Entry	Entry
Maintenance—Continued	
facilities, Navy design manual, changes.....	3200
ground area of shore activities, Navy manual.....	7873
ground structures, Navy manual.....	11731
heating systems, FAA handbook.....	10507
instrument maintenance course, suggested 1-year training program.....	575
management data, field command procedures, Army manual.....	13683
military air route surveillance radar equipment, FAA handbook.....	12381
naval electronics, installation and maintenance book, test methods and practices.....	11601
precision approach radar (PAR) facilities, FAA handbook.....	14226
preventive, of electrical facilities.....	11847, 21003
responsibility and authority—	
scheduled air carrier helicopters, civil air regulations amendment.....	12377
scheduled interstate air carriers, civil air regulations amendment.....	12362
supplemental air carriers, etc., civil air regulations amendment.....	12373
shipboard electronic equipment, maintainability design criteria handbook for designers.....	20781
trackage, Navy manual.....	11732
vehicle maintenance at non-personnel offices, handbook.....	20729
vehicle maintenance facility, handbook.....	20728, 21834
VHF omnirange equipment, evaluation, FAA handbook.....	12382
see also Trouble shooting.	
Maintenance shops, equipment, Federal Item Identification guides for supply cataloging.....	12291
supplements.....	3472
Maintenance technicians, examination announcement.....	8157
Maio, Domenic A., polarographic determination of oxygen content and capacity in single blood sample.....	17014
Majority, see Age (law).	
Make each person count, guide for nursing home administrators.....	11563
Making world safe for diversity.....	15260, 17031
Maksymuk, Bohdan, drop size spectra method for estimating mass median diameter of aerial sprays.....	18086
Malagasy:	
foreign trade regulations.....	2462
tobacco production and trade.....	12430
tracking stations, agreement.....	5704
Malaria, description, etc., health information series.....	15049
Malawi, tobacco production and marketing.....	14291
Malaya, labor conditions.....	13084
Malaysia:	
agriculture.....	21261
crisis in Southeast Asia.....	5936
economy, basic data.....	10694
establishing business.....	18175
trade with, trade mission report.....	4866
Male, George A., education in France.....	577
Malheur National Wildlife Refuge, mammals, list.....	14280
Malheur Reservation:	
roll of eligible Snake or Paiute Indians to receive funds from judgment.....	
law.....	17323
reports.....	102084, 15779
Mall:	
economy, basic data.....	8824
foreign trade regulations.....	14383
investment guaranties, agreement.....	20835
Mauritania boundary, study.....	9799
public health and social affairs, reports of 1st seminar.....	21583
Malignant tumors, see Cancer.	
Malik, Chester, auroral echoes at 19.4 megacycles per second.....	20959
Malinowski, Chester, see Kaluzny, Czeslaw (Chester).	
Mallory, Andrew R., Supreme Court rule, amend and qualify, hearings.....	4579, 8443
Malone, Joseph P., current labor market conditions in engineering, scientific, and technical occupations.....	4657
Maloney Bros. Nursery Co., Inc., relief.....	12042, 15627, 17184
Malt liquors, industry, review of 1963, outlook for 1964.....	15299
Mammalian genetics, see Genetics.	
Mammals:	
Cabeza Prieta Game Range, list.....	10569
fauna of southeastern Karakum and its change resulting from construction of Karakum Canal, USSR.....	2842
hibernation.....	4246
Malheur National Wildlife Refuge, list.....	14280
marine, protection, hearings.....	10330
National Bison Range.....	699
natural hibernation, bibliography.....	19145
physical-chemical systems, general dynamics.....	21738
radiosensitivity of inherited structures of cells in vitro, USSR study.....	5033
sea, America's rare.....	14274
wild, protecting forest trees and their seed.....	8684
Mammography, guide.....	16836
Man:	
air loads effects, studies.....	13726
among automatic machines, USSR study.....	20068
and technology, outlines in engineering psychology, USSR study.....	2668
biological future, philosophical aspects, USSR study.....	10782
chromosomal diseases, USSR study.....	5333
common intestinal protozoa.....	15045
compensatory hypertrophy of organs.....	5999
iodine-131 in post-mortem human thyroids.....	20759
man and technology, USSR study.....	1230
man in outer space, USSR study.....	16503
man, medicine, and work, historic events in occupational medicine.....	7699
oxygen toxicity, time-concentration effects.....	4258
physiological mechanisms of human organism, USSR studies.....	10803
rare, weak A antigens, A <sub>2</sub> , A <sub>4</sub> , A <sub>5</sub> , and A <sub>6</sub> .....	21011
Soviet ideas on interrelationship of people and machines.....	10850
trainable for 100-hour orbits and longer, USSR study.....	10928
training of people, implications of changing technology (address).....	14677
use in booster guidance and control.....	14789
water requirements, effect of ventilating air flow.....	14744
Man-hours, see Labor.	
Man-in-space, see Outer space.	

# JANUARY-DECEMBER

	Entry		Entry
Management, <i>see</i> Administrative management—Industrial management—Project management.		Manganese oxides, deposition and solution	6817
Management aide in low-rent public housing projects, suggested training course	15851	Manganese sulfide, heats and free energies of formation	16644
Management of our air resources	5656	Mangano, Maria, relief	2016
Management Services Office, Agriculture Dept., appropriations, 1965, hearings	10286	Manhattan, Kans.: aircraft accident—consumer expenditures and income, 1961	11923
Managers: management aide in low-rent public housing projects, suggested training program	15851	Maniar, Nareesh M., bending moments within midship half length of Mariner model in extreme waves	11272
traffic, industrial, employment outlook	9408	Maniece Bayou: flood control, engineer report—departmental edition—document edition	15870
training and development, Army pamphlet	13677	Mankowich, A., HLB of nonionic additive influence on detergency of alkaline cleaners containing anionic surfactant	15407
wildlife refuges, address list, 1963	4747	Man-machine system, performance and control system lags	9686
Manasquan, N.J. to Cape Hatteras, N.C. and Chesapeake Bay, coastal warning facilities chart, 1964	13522	Manpower: <i>see also</i> Human engineering.	14791
Manasquan River-Barnegat Bay Canal: change name to Point Pleasant Canal—law	21140	Mann, John P., relief	316, 17693, 19381
reports	17754, 19469	Manpower: active policy of economic growth, role of employment security (address)	7363
Manchester, Alden C., structure of wholesale produce markets	8468	American science, 1962, report of National Register of Scientific and Technical Personnel	20667
Manchester, N. H., occupational wage surveys	1378, 20442	area redevelopment report, labor market area—	
Mancini, Armando, long line azimuths from optical observations of ANNA flashing satellite	19150	Altoona, Pa.	21275
Manella, Raymond L., racially integrating State's training schools	13782	Atlantic City, N.J.	17931
Manely, William T., competitive practices in marketing Florida and Texas fresh grapefruit	33	Charleston, W. Va.	17932
Maneuvering board manual	9677	Duluth, Minn.	12332
Maneuvers, <i>see</i> Flight—Military art and science.		Fall River, Mass.-R.I.	12333
Mangan, George F., Jr., membrane technology pertaining to saline water desalination, bibl.	848	Johnstown, Pa.	17933
Manganese: ammoniacal-ammonium carbonate leaching of manganiferous materials from southern district, Aroostook County, Maine	7446	Mayaguez, P.R.	17934
chemistry in natural water (series)	6817-18	Superior, Wis.	12332
concentrates, acid leaching and electrolytic recovery from solution	13118	Wheeling, W.Va.-Ohio	17935
electronic paramagnetic resonance spectra, chemical bond estimation, USSR study	14456	automatic data processing requirements in Federal Govt.	2942
extraction using ferrous sulfate and pickle liquor	13128	civil aviation industry requirements, Project Long Look	21292
hydrometallurgical recovery from manganiferous slimes and lime-stones	7440	comprehensive policy, proposals, report	15817
intracellular and extracellular concentration by aquatic organisms	6818	additional copies, report	15688
mineral industry survey, monthly minerals yearbook chapter	3702, 20485	development and apprenticeship role, United States and Western Europe	10430
ores: enriched, estimated cost of exploitation, Maggie Canyon deposit, Artillery Mountains region, Mohave County, Ariz.	13115	development and training act of 1962—	
sulfatization of manganese minerals and selected gangue materials	20498	amendments of 1963—	
suspension of import duty—law	13887	hearings	397
reports	8311, 12234	law	1943
resources of Batesville district, Ark., field investigations, July 1956-June 1961	14760	reports	2048, 4527
		explanation	7354, 21655
		employer's guide to on-the-job training	20977
		employment data needed for evaluating, etc., training, Labor and Health, Education and Welfare Depts., GAO report	10610
		occupational mobility through training	16568
		occupational training of women	18609
		research and training, report of Secretary of Labor	9374
		text—	13026
		training activities, report of Secretary of Health, Education, and Welfare Dept.	8786
		training disadvantaged groups	11246
		training program	19643
		workers' decisions to forego retraining, study of factors	18610
		development and training program—	
		clothing maintenance specialist	15839
		companion to elderly person	15840
		family dinner service specialist	15845
		forestry aide	15846



# INDEX 1964

Entry	Entry
Manpower—Continued	Manufactures and manufacturers:
development and training program—Continued	agents, role in economy, bibliography----- 20789
homemaker's assistant----- 15847	annual survey of manufactures, 1962----- 154-156, 1805, 4341-43, 6027-32, 8104, 10045, 11886-888.
hotel and motel housekeeping aide----- 15848	capital expenditures at manufacturing establishments, 1951-62----- 11888
landscape aide----- 15850	industry groups and industries----- 11886
management aide in low-rent public housing projects----- 15851	reports based on, announcement and order form----- 1804
Norfolk, Va., casework prevents dropouts----- 13024	States, standard metropolitan statistical areas and large industrial counties, statistics----- 6027
suggested curricula----- 19631	East North Central States----- 6030
supervised food service worker----- 15858	East South Central States----- 4343
visiting homemaker----- 15860	Middle Atlantic States----- 6032
experimental and demonstration programs, demonstration notes----- 13024, 14663-664	Mountain States----- 4342
health manpower source book----- 5653	New England States----- 8104
improved management plans, etc., by Federal Government, 1963----- 10337	Pacific States----- 6029
industry, surveys----- 4658	South Atlantic States----- 6028
manpower evaluation report (series)----- 11246, 16568, 18609	West North Central States----- 6031
manpower in 1960's, health manpower source book----- 20754	West South Central States----- 15302
nation's manpower revolution, hearings----- 15815	summary----- 11887
policies for youth (address)----- 20425	value of shipments----- 4341
policy, people's responsibility (remarks)----- 18608	change sheet----- 1807
report of the President, statistics----- 7359, 11249	census, 1958----- 19306
reports----- 2942-43, 13027	industry report----- 1807
requirements, resources, utilization and training, Labor Dept. report, statistics----- 7359, 11249	link of establishment data and IRS corporation data----- 19306
research and development, study-committee print----- 19511	census, 1963-----
report----- 19474	alphabetic list of manufactured products----- 4339
research bulletins----- 2944, 5418, 7360, 11247, 20427	hearings----- 8391
resources of Nation, training and utilization, hearings, 543, 2247, 4589	manual of industry and product classification----- 6036
scientific and engineering, studies, utilization, salaries----- 6123	manufactured products, numerical list----- 11911
selected readings in employment and manpower----- 10480, 15813	materials consumption items list----- 8137
vols. 1-2, print additional copies, reports----- 15683, 17513	reference manuals, announcement and order form----- 13746
services for equal employment opportunities (address)----- 15862	subject reports----- 11891, 17078
States, selected indicators----- 2944	preliminary----- 3309
training and job changing----- 13027	census publications, price list----- 13389
utilization in Federal Government, symposium----- 17062	earnings series, summary----- 9378
utilization in financial management functions in Defense Establishment, report----- 12079	1939-63----- 14685
Manpower Administration, appropriation, 1965, proposal----- 19527	1939-64----- 2950
Manpower, Automation and Training Office, technical manpower publications and services, list----- 2946	Jan. 1962-Sept. 1963-----
Manpower Conservation, President's Task Force, see President's Task Force on Manpower Conservation.	electronic computing machines, reliability of manufacture, USSR study----- 20216
Manring, E., model for periodic character of winds from 85 to 135 km----- 14767	enterprise statistics, 1958----- 184
Mansfield, Mike, eulogy delivered by, Nov. 24, 1963----- 2132	announcement and order form----- 153
Manson unit, see Chief Joseph Dam project.	expenditures for new plant and new equipment----- 10045
Manual attitude control systems, parametric and comparative studies of operating modes of control----- 13150	expenditures for selected supplementary compensation practices for production and related workers, manufacturing industries, 1962----- 20443
Manuals, see names of departments, etc., issuing manuals—also subjects.	export sales and orders of durable goods, summary 1963----- 8119
	exports sales and orders, current industrial reports----- 3390
	Federal supply code for manufacturers-----
	excluding United States and Canada, supplements----- 3497
	United States and Canada-----
	code to name----- 2251
	supplements----- 3498
	name to code----- 559
	supplements----- 3499
	financial report of corporations----- 3955
	fuels and electric energy consumed in manufacturing industries, 1962 census of manufacturers, 1963----- 17078

# JANUARY-DECEMBER

	Entry
Manufactures and manufacturers—	
Continued	
general statistics—	
divisions and States, 1962, 1961	
and 1958	156
industry groups, etc., 1962,	
change sheet	154
injury-frequency rates in manufac-	
turing industries	18641
injury rates in manufacturing in-	
dustries	3597
inventories, end of 1958-62	155
change sheet	1805
manufactured products, alphabetic	
list, 1963 census of manufac-	
tures	4339
manufacturers' orders and inven-	
tories, Census Bureau series,	
descriptions and procedures	17109
manufacturers' sales, inventories,	
etc., industry survey	3593
manufacturers' shipments, inven-	
tories, and orders—	
chart book, 1953-63	15306
current industrial reports	189, 3706
1947-63 revised	188
power equipment in manufacturing	
industries, census of manufac-	
tures, 1963	11891
sales management, bibliography	9767
small manufacturers, management	
aids, annual compilation	18941
U.S. share of world markets for	
manufactured products, analy-	
sis of changes from 1954-61	14395
wage developments, summary re-	
lease	4134
see also names of manufactured	
articles.	
Manures, see Fertilizers.	
Manuscripts:	
Armenian, in Freer Gallery of Art.	6752
instructions for typing manuscripts	
to be printed at GPO	4736
Many crises of Soviet economy,	
symposium	12274
Mao Tse-tung:	
French delegation's interview and	
impressions following Asian	
tour	8987
works, studied by officers and men	
of Communist Chinese army	12981
Mapel, William J.:	
geology of Upton quadrangle,	
Crook and Weston Counties,	
Wyo	19776
nonopaque heavy minerals in sand-	
stone of Jurassic and Creta-	
ceous age in Black Hills	4777
Maplass, Leslie F., automated teach-	
ing for retarded children, sum-	
mary comparison of two proce-	
dures	12321
Maple:	
boxelder leaf blight attributed to	
2,4-D spray drift	18069
sugar—	
concentrated silvicide test	6748
ninhydrin color test for detect-	
ing buddy flavor in maple	
syrup	1687
veneer logs, grading for pith	
flecks	12459
variation in sugar content in	
budded clone	8653
Maple City (ferry boat):	
admit to American registry	1910,
	2001, 4523
Maple sirup, buddy flavor, ninhydrin	
color reaction test for detect-	
ing	1687
Maple syrup urine disease	19310

	Entry
Maps and charts:	
aeromagnetic survey in geology,	
USSR study	6928
aeromagnetic surveys in northwest-	
ern Oregon, geologic interpreta-	
tion	18112
Aeronautical Chart and Informa-	
tion Center—	
bulletin	3215
bulletin digest	4222, 15225
chart updating manual	3314
cartographic records of General	
Land Office, list	7573
Census Bureau, United States	
maps, GE-50 series	4356, 13775
census publications, price list	13389
Civil War maps in National	
Archives	16735
Coast and Geodetic Survey—	
aeronautical charts, dates of	
latest editions	3405
charts, sell for not less than	
cost—	
law	17300
reports	12224, 15538
flight information publications,	
dates of latest editions	3406
instrument approach procedure	
charts and airport obstruc-	
tion charts, dates of latest	
editions—	
eastern U.S.	3407
western U.S.	3408
radio navigation charts, sell for	
not less than cost, hearing	2236
coordinate transformation	3053
copyrighted—	
Jan.-June 1963	4595
July-Dec. 1963	17894
Federal item identification guides	
for supply cataloging	12296
supplements	3477
geobotanical mapping, USSR study	16025
geographical grid for Nimbus cloud	
pictures	9576
lunar chart—	
LAC 39, Aristarchus	4255
LAC 40, Timocharis	1740
LAC 41, Montes Apenninus	20968
LAC 58, Copernicus	15228
LAC 76, Montes Rhipaeus	17000
LAC 80, Langrenus	7991
LAC 94, Pitatus	15229
mapping, cooperative program,	
agreement with Dominican Re-	
public	21893
mine maps, fitting surfaces to as-	
say and other data by regres-	
sion analysis	18691
mutually consistent magnetic	
charts based on orthogonal	
functions	20964
nautical chart manual	8170
nautical charts, Coast and Geodetic	
Survey catalog	11957
Naval Oceanographic Office—	
chart correction lists	1524
	11480, 21819
publications, fees for sale, in-	
crease—	
law	17295
reports	10251, 15729
point concentration, accuracy with-	
in model, Hungarian studies	12657
Polish topographical, hydrographic	
details shown	12790
population distribution, urban and	
rural, U.S., 1960	4356
price list	7683
standard metropolitan statistical	
areas, U.S. and Puerto Rico,	
1963	13775
topographic mapping challenging	
future	8773

# INDEX 1964

Entry	Entry
Maps and charts—Con. treasure maps and charts in Library of Congress, list.....	14716
USSR, petroleum and gas-bearing areas, schematic map for prediction.....	1327
Weather Bureau, daily synoptic series.....	3398
weather maps, Northern Hemisphere, for IGY.....	5758, 7842, 11688, 13527-528
world weather maps, Northern Hemisphere, for IGY.....	9880
see also names of localities—also subjects.	
Marangon, Teresa, relief.....	15662
Marble Canyon Dam and reservoir, proposed, relationship to Grand Canyon National Park and Monument, general information.....	18929
Marble settlers, employment outlook.....	13056
Marcelo, Bernardino D., relief.....	19551
Marcelo, Josefina Q., relief.....	19550
Marcher, Melvin V., ground-water geology of Dickson, Lawrenceburg, and Waverly areas in western Highland Rim, Tenn.....	19799
Marcus, S.: effect of acclimatization to 2° C on host susceptibility to Klebsiella pneumoniae challenge.....	7981
effect of cold exposure on formed elements of mouse peripheral blood.....	19143
exposure effect on resistance to Ehrlich ascites tumor.....	7982
zymosan and endotoxin treatment effect on experimental Coxsackie B virus infection.....	7983
Mare Island Strait, port.....	623
Marianna Islands, Guam, geology and hydrology (series).....	19784
Maricopa County, Ariz.: geology and ground-water of Luke area.....	14356
geology and ground-water resources of McMullen Valley.....	4811
ground-water conditions in Rainbow Valley and Waterman Wash areas.....	4814
Maricopa Indians: transfer lands to Salt River Pima-Maricopa Indian Community—law.....	17324
reports.....	12108, 15719
Marine aids, see Navigation.	
Marine animals, see Marine fauna.	
Marine biology: hydrobiology, USSR research.....	10818
inland water hydrobiology, 7th conference, USSR.....	2841
marine organisms, early stages, cytochemical studies, USSR.....	4901
primary production of bodies of water, errata.....	11852
primary productivity, bibliography.....	126
radioactive isotopes accumulation coefficients data in organisms, USSR study.....	10847
Marine Corps: air stations, pavement evaluation data.....	7874
commandant, nomination of Wallace M. Green, Jr., hearings.....	523
equipment for tactical airfields, procurement— hearing.....	8383
report.....	21187
Fleet Marine Force manual FMFM series.....	1393-94, 5459, 9486-87, 11309, 16619, 18653, 20456
history of operations in World War II, isolation of Rabaul.....	9488
Marine Corps—Continued management review.....	3780
Marine division, Fleet Marine Force manual.....	20456
new 4-ocean challenge.....	15015
officers: promotions, improved opportunity, extend— hearings.....	15799
law.....	17252
reports.....	10246, 12103, 14118
register— departmental edition.....	11486
document edition.....	10180
publications, price list.....	7685
rifle squad, manual.....	9487
shore party and helicopter support team operations, manual.....	5459
technical manual.....	5460
uniform regulations, changes.....	14721-722
Marine Corps Air Station, Beaufort, construction, report.....	353
Marine Corps Reserve: reserve marine (periodical).....	3975
six months training program, basic information.....	2976
Marine fauna: America's rare sea animals.....	14274
mammal protection, hearings.....	10330
marine animals share experience with designers, USSR study.....	12931
migrations and radioactivity of certain marine animals, USSR studies.....	7061
Soviet studies of ecology.....	7107
studies in marine zoology, USSR.....	8948
see also Benthos.	
Marine Hydrophysical Institute, USSR, activities.....	10765
Marine meteorological observations, manual.....	9878
Marine oils, see Fish oil.	
Marine pelecypods, see Pelecypods.	
Marine phytoplankton, see Phytoplankton.	
Marine science, see Oceanography.	
Marine terminals, see Terminals (transportation).	
Marine zoology, see Marine fauna.	
Mariner ships, see Ships.	
Mariners, see Notice to mariners.	
Mariner's weather log.....	3707
Marion County, Ga., redevelopment area, opportunities for economic growth.....	15253
Marital status, see Marriage.	
Maritime Administration: current regulations, index.....	13096
decisions— Apr. 1956-Apr. 1960.....	8550
Apr. 1960-Aug. 1961.....	21297
separates.....	3410
releases MA NR series.....	3902
report, 1963— departmental edition.....	7423
document edition.....	6222
research and development program (remarks).....	20459
SP series.....	2977, 7425, 13097, 14723-724, 18654-655, 20457-460, 21682
value engineering program, future potential.....	2977
Maritime Commission, decision, separates.....	3410
Maritime industry, see Merchant Marine—Shipping.	
Maritime law, law of the sea, convention on Continental Shelf, adopted at UN conference.....	15114
Maritime resources for security and trade.....	10833
Maritime safety data for shipyards.....	18615-616
Maritime safety digest (periodical).....	3708

# JANUARY-DECEMBER

	Entry
Maritime service, <i>see</i> Shipping.	
Maritime Subsidy Board, current regulations, index.....	13096
Mark, Jerome A., industry indexes of output per man-hour.....	2969
Mark sensing, <i>see</i> Electronic data processing systems.	
Market gardening:	
contract production of truck crops, 12 selected areas, United States.....	12311
truck crop production practices—	
Monterey County, Calif.....	2260
Yakima County, Wash.....	17903
Markets and marketing:	
acreage marketing guides.....	2
agricultural marketing (periodical).....	5784-86, 15181
agricultural marketing agreements act, amend, hearings.....	3220
agricultural marketing firms, rising depreciation of assets, some causes and implications.....	19495
Austria, market for supermarket, food processing, and food handling equipment.....	4612
BDSA publications list.....	12560
Colombia, market for U.S. products.....	11878
directory of Federal-State market news reports.....	10690
Europe, indicators.....	4184
fats and oils, modified edible, market potentials.....	4850
financing and marketing, Siamese twins (remarks).....	11771
foreign crops and markets (periodical).....	17989
Hong Kong, market for U.S. products.....	3519
international marketing efforts (address).....	15082
Iran, factors.....	11966
Italy, potential market for U.S. specialized machine tools.....	8811
Lebanon, factors.....	12551
low cost marketing aids for higher export profits.....	10697
make world market yield its opportunities for America (address).....	10822
making sales figures talk.....	6118
market indicators for Asia and Oceania.....	5683
market news leaflets, 6718-20, 19729-730.....	14372
marketing and transportation.....	1705, 4206, 7928, 11768, 15211-213, 20928
marketing bulletins.....	3709
marketing information guide.....	31
marketing research methods, listing of materials from marketing information guide.....	3710
marketing research reports.....	4336
1700-8, 4207-11, 5832-38, 7929-32, 9947-53, 11769-773, 13586-592, 15214-215, 16957-959, 19086-89, 20929.....	32-36
marketing research workers, employment outlook.....	9383
meat market operations, commissary stores, Army technical manual, changes.....	10014, 19218
modernization, key to new markets (addresses).....	10043, 11880, 13741
Morocco, market for U.S. products.....	19823
national directories for use in marketing.....	13441
Negro market, economic trends (remarks).....	10128
Netherlands, factors.....	14388
Nigeria, market for U.S. products.....	6843

	Entry
Markets and marketing—Continued	
ores and concentrates of gold, silver, copper, lead, and zinc in U.S.....	13105
Peru, factors.....	18173
selling in Austria.....	19824
small marketers aids, annual compilation.....	1582, 20792
stable dollar role in expanding world markets (remarks).....	4718
Switzerland, factors.....	10699
trends and consumer services (address).....	5865
U.S. share of world markets for manufactured products, analysis of changes from 1954-61.....	14395
United Arab Republic, market factors.....	21091
Venezuela, market for U.S. products.....	14370
wholesale produce markets, structure.....	8468
world markets (address).....	6117
world markets for American agriculture (address).....	5866
<i>see also</i> Commodity exchanges—also names or classes of commodities, etc., marketed.	
Marking:	
articles imported in containers, requirements, report.....	2065
Meat Inspection Division program, paper labels and bands, imported, requirements, report.....	1693
registration, aircraft and related products.....	10264
Markov chain theory applied to prediction of retirement rates.....	8531
Marks, Leonard, Jr., nomination, hearing.....	15235
Marks, Melvin R., airman specialties, development of standard list of work requirement factors.....	14127
Marksmanship, <i>see</i> Shooting.	4256
Markuson, Barbara E., libraries and automation, proceedings of conference.....	20452
Markwalter, George, claim.....	12031
Marowitz, Charles, relief.....	21171
Marquette, Mich., principal electric facilities, map.....	674
Marquette County, Mich., opportunities for economic growth.....	17023
Marrella, Pasquale, relief.....	1871, 2144
Marriage:	
District of Columbia divorce, legal separation and annulment laws, amend, report.....	13972
records, where to write.....	11588, 20773
senior citizens, marital status, statistics.....	10072
State laws governing emancipation of minors.....	13551
trends.....	2436
<i>see also</i> Premarital examinations.	
Married persons, <i>see</i> Husbands and wives.	
Marrow:	
bone—	
cell injection, effect on influenza morphology in irradiated animals.....	9330
transplantation in acute radiation sickness, state of hemopoietic tissue, USSR study.....	14592
transplantation on dogs with acute radiation sickness, humoral component, USSR study.....	4905
transplantation problems in radiation affections, USSR study.....	16028

Do not order from index; see indicated entry

Page 409



# INDEX 1964

Entry	Entry
Mars (planet):	
atmospheres, convective and radiative heating of shapes entering at suborbital speeds.....	3026
environment, simulated, germination, etc., of bacterial spores.....	78
ionosphere, theoretical study.....	14868
orbiting probes, electrically propelled, constant thrust, parametric study.....	21755
popular science articles, USSR.....	5192
small probe entering atmosphere.....	3008
strength and structure.....	9616
tides in atmosphere.....	18722
Marsh, R. Brandon, testimony, hearings.....	6526
Marsh screw amphibians, <i>see</i> Cargo carriers.	
Marshall, L. B., handbook of Hospital Corps, Navy.....	3565
Marshall, Lawrence G.: mining, methods, etc., crushed-limestone operations, Madison County, Iowa.....	5473
sand and gravel operations and costs, Martin Marietta Corp.....	5474
Marshall, T. E., III, automatic weather station (grasshopper).....	13327
Marshall County, W. Va., coal preparation characteristics.....	14746
Marshall Islands, Bikini and nearby atolls (series).....	15945
Marshall's Creek, Pa., motor vehicle accident.....	21377
Marson, Frank M., bibliography on snow, ice, and permafrost.....	15866, 19652
Martin, Clarence D., Jr.: addresses, etc.— Mar. 18, 1964..... Apr. 7, 1964..... May 7, 1964..... May 22, 1964..... June 15, 1964..... Aug. 11, 1964.....	8186 8185 10131 11972 13826 15368
Martin, Dale A., adsorption and recovery of sulphur dioxide from industrial gases by using synthetic zeolites.....	1439
Martin, Edwin M., address, Sept. 20, 1963.....	1598
Martin, Elizabeth M., relief.....	1862, 2150
Martin, Fant W., woodcock status report, 1963.....	4746
Martin, Glenn L., Co., seaplanes procured from, additional costs, Navy Dept., GAO report.....	8705
Martin, Henry B.: distribute land sale proceeds to— law..... reports.....	17312 15428, 17710
Martin, Kenneth L., limited C-130-E category 2 stability and control tests.....	13615
Martin, Ralph G.: distribute land sale proceeds to— law..... reports.....	17312 15428, 17710
Martin, Roscoe C., metropolis in transition, local government adaptation.....	831
Martin, Ruby G., public education, Civil Rights Commission staff report, 1964.....	21049
Martin, Stanley: distribute land sale proceeds to— law..... reports.....	17312 15428, 17710
Martin, William McC., Jr.: addresses, etc.— Dec. 9, 1963..... Jan. 21, 1964.....	2326 4720
Martin Marietta Corp.: Aerospace Division, leasing electronic data processing systems, unnecessary cost, GAO report, sand and gravel operations and costs.....	8735 5474 14038
Martino, Angelina, relief.....	14038
Marton, Tibor W.: foreign-language and English dictionaries in physical sciences and engineering, 1952-63..... Soviet research in field emission, 1960-63, bibliography.....	16737 5550
Marty, Robert, evaluating and scheduling white-pine weevil control in northeast.....	14330
Martz, C. William, complex Fresnel integral tables.....	14797
Martz, Helen E., illegitimacy and dependency.....	21366
Marxism, <i>see</i> Communism.	
Maryland: annual survey of manufactures, 1962, statistics for States, standard metropolitan statistical areas, and large industrial counties..... climatic summary 1951-60, decennial census..... climatological data..... construct additional bridge across Chesapeake Bay— hearings..... report..... eastern— five-year effects from row thinning in loblolly pine plantations..... loblolly pine stands, conditioning for regeneration..... electric rate book..... employment, civil rights report..... firefighting agreements with D.C., amend act— law..... report..... fishery products, wholesale dealers, list..... labor organizations, reporting, register..... landings, fish and shellfish..... annual summary, 1962..... annual summary, 1963..... loblolly pines, tip-moth control fails to improve height..... mineral industry, minerals year-book chapter..... municipal waste facilities..... municipal water facilities..... precipitation data, hourly..... public school finance program, 1962-63..... training schools, integrating..... women workers, 1960.....	6029 20877 3329 17663 13954 8676 787 4707, 19692 6075 17332 15785 710, 18011 16571 3711 691 15915 8652 1414, 21760 3103 18908 3578 4639 13782 11726
Marzolf, J. M., sea water battery plus tunnel diode converter as power source.....	5606
Masers: molecular amplifier group, design..... rutile traveling wave..... solid state optical and infrared maser materials, bibliography.....	7959 20613 7956
Masica, William J.: hydrostatic stability of liquid-vapor interface..... gravitational field..... low-acceleration field.....	11399 18771
Mason, Robert M., NABUR, NAREC, assembler for Burroughs D825 modular data-processing computer.....	20708
Masonich, Nick, relief.....	435, 1884

# JANUARY-DECEMBER

	Entry
Masonry:	
repairs and utilities, technical manual	4288
supervisory jobs, examination announcement	6088
Masons, stonemasons, employment outlook	13056
Mass (physics):	
general properties of central trajectories of point of variable mass, USSR study	8903
nuclei, structure above number 40, conference, proceedings	19226
spring-mass representation of free-free nonuniform bar in response to longitudinal forces	18749
Mass addition in stagnation region for velocity up to 50,000 ft. per second	18795
Mass spectra, see Spectra.	
Mass spectrometers, see Spectrometers.	
Mass transfer:	
cooling on blunt cone to Mach no. of 10.6, free-flight investigation	9588
sodium—	
corrosion sample data, screening test data and analysis	10027
test loop design	5958
Massa, Ronald J., visual data transmission	13643
Massachusetts:	
annual survey of manufactures, 1962, standard metropolitan statistical areas, and large industrial counties, statistics	4342
civil rights report, housing in Boston	1838
climatic summary 1951-60, decennial census	21920
electric rate book	19693
fishery products, wholesale dealers, list	703, 18004
geology of selected quadrangles (series)	10631
jurisdiction over lands within Fort Devens Military Reservation—	
law	17243
reports	365, 14111
labor organizations, reporting, register	16570
landings—	
fish and shellfish	3712
by ports, annual summary, 1963	14264
fishery products by gear and sub-area, annual summary, 1963	15913
mineral industry, mineral yearbook chapter	21701
municipal waste facilities	3101
municipal water facilities	18906
natural resources	6834
Port Authority, property to be conveyed to, remove conditions—	
law	17420
reports	17525, 17829
shoe manufacturing, wage chronology	20432
truck inventory and use survey, Apr. 1, 1963	17083
weather stations, decadal census	15161
Wilmington-Reading area, geology and ground water conditions	18141
women, labor laws, summary	19035
Massachusetts Institute of Technology, MIT-UNICEF studies on production of fish protein concentrate	8601
Massillon, Ohio, railroad accident	15992
Masters, Richard L., effects of alcohol and hypoxia and heterophorias	7997
Masters of space	21868
Masterson, James R., writings on American history, 1956	11815

	Entry
Mastitis, screening procedures, recommendations	5657
Masts and rigging, technical manual	10013
Matanuska formation, stratigraphic reconnaissance in Matanuska Valley, Alaska	14339
Matanuska River and Valley, stratigraphic reconnaissance of Matanuska formation, Alaska	14339
Material Inspection Service:	
administration manual	3084, 15014, 18868
Navy contract termination and inventory disposition manual	5625, 9685
Materialism, dialectical, and medicine problems, USSR study	2655
Materials:	
aircraft—	
metallic materials and elements for flight vehicular structures	12303, 14162
NASA research on materials applicable to supersonic transports	20566
structural failures caused by corrosion, fatigue, and abrasion, engineering survey	19001
atomic—	
emission spectrum analysis	5952
engineering materials, list	1774-75, 8071, 13710, 21016
Index	8072-73
reactors, centrifuges, and instruments	21017
private ownership—	
hearings	15399
law	17348
reports	15548, 15766
building—	
trade associations and professional societies	148
USSR industry, translations	20128
Communist China, translations—	
985, 1108, 1184, 1225, 1340, 2571, 2594, 2609, 2684, 2799, 2926, 4940, 4959, 5057, 5243, 5264, 5390, 6919, 6932, 7036, 7081, 7106, 8940, 9183, 10768, 10951, 11061, 12650, 12822, 13017, 14650, 16293, 16421, 16482, 18398, 18475, 18600, 19857, 19908, 20176, 20313, 21469	
composite, structural behavior	14784
construction and building, USSR industry, translations—	
16394, 18349, 20196, 20201, 20324, 21548	
consumption items, censuses of manufactures and mineral industries, 1963, list	8137
corrosive, hot, filler device for handling	20561
earth, hydraulic properties (series)	819
electrical and electronic properties, information retrieval program	4224
engineering, USSR study	2552
evaluated as insecticides and acaricides, Brownsville, Tex	9032
hard, mining or insitu disintegration	15019
Industries, East European, translations	908,
1023, 1333, 2546, 2784, 2907, 4931, 5059, 5195, 5218, 5278, 5292, 5411, 6982, 7259, 7326, 8968, 9048, 9119, 9145, 9215, 9243, 9277, 9288, 10824, 10936, 11052, 11116, 11180, 11223, 12581, 12670, 12736, 12794, 12838, 13023, 14497, 14544, 14603, 16126, 16241, 16416, 16481, 18242, 18311, 18346,	

# INDEX 1964

Entry	Entry
<b>Materials—Continued</b>	<b>Mathematics—Continued</b>
industries, East European, translations—continued	Boolean functions, simplify with Veitch diagram plotter-----
18375, 18458, 18535, 18586, 19859, 19939, 19997, 19999, 20181, 20209, 20237, 20289, 20386, 21454, 21487, 21560, 21638.	civil service, cooperative work-study positions, opportunities for college students-----
labor and materials requirements for public housing construction-----	college students, junior-year enrollments, survey, 1962-----
13072	computer mathematics and engineering, USSR study-----
mechanical cycling fatigue behavior for supersonic transport, exploratory studies-----	constructive optimal coding methods for noisy channels, USSR study-----
11351	9303
nuclear, see, above, atomic.	courses, written materials, films, mathematics, science, engineering, studies supported by National Science Foundation-----
12305	20608
plastics, tooling techniques-----	debate on use, facts and opinions, Hungarian study-----
2615	5097
powder-metal materials and alloys, strength, at normal and high temperatures-----	dispersion with linear adsorption isotherm-----
8590	19785
preservation, packaging, and packing, Federal test method standard-----	distribution function, determining, for length of maximum carry, USSR study-----
4225	9347
property data processing system development-----	East European journals, abstracts-----
radioactive—	1175, 1346, 2496, 2631, 2690, 2741, 2764, 2803, 4967, 5231, 6888, 7012, 7025, 7113, 7195, 7207, 8860, 9026, 9077, 9133, 9162, 9171, 9309, 9369, 11063, 11185, 12588, 12643, 12782, 12874, 12998, 13020, 14423, 14434, 14469, 14596, 16014, 16100, 16221, 16274, 16365, 16540, 18369, 18402, 18428, 18433, 18554, 19858, 20064, 20126, 20335, 21431.
safe handling-----	education aids, space oriented, for early elementary grades-----
11855	19625
transportation-----	financial assistance for strengthening instruction in public schools, guidelines-----
reactor—	8488
fuel sheaths, alloys in superheated steam environments, relative performance-----	functions—
10030	frequency response and coherence for multiple input linear systems-----
review of recent developments-----	9534
3961	Hankel, computation-----
requirements—	14940
civil works construction by Corps of Engineers-----	inservice education, promising practices for elementary and secondary school teachers-----
13069	19630
public housing construction-----	Japanese text, statistical study-----
20436	16090
stock material and miscellaneous articles, classification definitions-----	laminar heat transfer over melting plate, modified Leveque problem-----
7670	10485
telephone system construction contract, REA-----	18512
13435	linguistics, USSR study-----
testing, bibliography-----	mathematical functions with formulas, graphs, and mathematical tables, NBS handbook-----
9550	13267
thermally conductive metal wool-silicone rubber material, used as a shock and vibration damper-----	mathematical linguistics international seminar, 1963, Bucharest, Rumania-----
11370	2833
see also Strategic materials—also names of materials.	mathematical methods, use in biology-----
<b>Materials handling:</b>	7020
cotton gins in southwest, increasing efficiency-----	mathematical modeling of technological processes on electronic digital computer-----
12512	5355
equipment, Federal item identification guides for supply cataloging-----	mathematical problems of cybernetics and computer technology, USSR study-----
12289	20269
equipment industry, review of 1963, outlook for 1964-----	mathematical simulation and electric circuits-----
6018	9315
technical manual-----	mathematical simulation in sociological research, USSR-----
109, 4290	20234
<b>Matériel, see Military supplies.</b>	mathematics and mathematical physics, journal of research, National Bureau of Standards-----
<b>Maternal welfare, see Mothers.</b>	3629, 13270
<b>Maternity, see Mothers.</b>	national defense education act, title 3, grants to strengthen instruction, questions and answers-----
Maternity care utilization and financing, source book of U.S. data-----	15855
16837	natural function tables for computing geographic positions on international ellipsoid-----
<b>Mathal, K. V., relief</b>	10117
17174	
<b>Mathematicians:</b>	
employment outlook-----	
9403	
research opportunities, examination announcement-----	
8156	
<b>Mathematics:</b>	
abstracts pertaining to Communist China in Soviet journals-----	
1080, 2495	
aids for mathematics education (series)-----	
570, 19625	
algorithms-----	
approach to analysis of teaching methods is valid, USSR study-----	
1329	
optimizing manufacture and distribution of non-homogeneous production, USSR study-----	
9080	
partially ordered groups, USSR study-----	
1152	
strong and weak reducibility, USSR study-----	
9034	
applied mathematics series-----	
13267	
are multi-value calculi logic? USSR book review-----	
5142	

# JANUARY-DECEMBER

	Entry		Entry
Mathematics—Continued		Mathews, Walter L., and others, relief	318, 6163, 6410
Navy training course	9678	Mathews County, Va.:	
optimum control theory problems, USSR study	9346	Garden Creek, hurricane survey, engineer report—	
percentage points of beta distribution	13275	departmental edition	6590
perspectives for modern mathematical methods in forestry, Rumanian study	18285	document edition	8204
philosophical questions, USSR study	9328	Mathisen, Ole A., statistical records and computations on red salmon runs in Nushagak district, Bristol Bay, Alaska, 1946-59	19737
placement examinations	4632	Mating, Fred W., general solution of laminar compressible boundary layer in stagnation region of blunt bodies in axisymmetric flow	18734
postdoctoral research associate-ships, opportunities at NBS	1495	Matlack, E. Brooke, Inc., accident	876
problems in cybernetics and computer technology, USSR studies	7053	Matlins, Stuart M., selling in Austria	19824
random processes, prediction of peaks, fatigue damage, and catastrophic failures	9535	Matloff, Maurice, Mr. Roosevelt's 3 wars, FDR as war leader	9966
research and development, opportunities, examination announcement	11949	Matrices (mathematics): optimum design of multipath signals	17005
research and production, Rumanian articles	6901	MATS, see Military Air Transport Service	
research summaries of projects supported by AEC	11866	Matter of record, report of article about REA and its borrowers, Reader's digest, Dec. 1963, article	9750
Rumanian school	14477	Matthews, Earle D., soil survey, Caroline County, Md.	15091
secondary summer school, offerings and enrollments, 1962	570	Mattison, C. W., in our forests are many mansions	2356
service of economist, USSR	1093	Mattresses, current industrial reports	3390
solutions for transport problems	5233	Mattresses (hydraulic engineering): articulated concrete, stainless and copper-clad steel wires, galvanic effect	14214
Soviet and Chinese articles, English abstracts	3439	Maul:	
space oriented, what's up there, source book for grades 5-8—student edition	7570	Kahului Harbor breakwater repair, designs	8520
teacher edition	7571	normal phase variations of 18 kc/s signals from NBA observed	9636
tables—		principal electric facilities, map	680
complex Fresnel integral	14797	Mauritania:	
electron radial functions and tangents of phase shifts of light nuclei	18804	foreign trade regulations	14383
hydrogen, composition, opacity, and thermodynamic properties at high temperatures	5502	information on ministries, translations	8857
incomplete gamma-function ratio and percentage points of chi-square and beta distributions	11800	Mall boundary, study	9799
supersonic flow around right circular cones—		Mall boundary, study	12188
small angle of attack	14796	Maurus, Edward J., relief	13844
zero angle of attack	11360	Mavroides, W. G., monopole phased-array feed for spherical reflectors	13632
X and Y, elliptic rectangular coordinates	16773	Maxilla-maxillofacial and oral health, military research	11850
X-coefficients and A factors for triple angular correlation analysis	18780	Maxwell, Marvin S., efficient PCM error correction and synchronization code	14860
theorems, topological spaces on normally embedded sets	7567	May, Charles E., mechanism of ductile bending in ionic crystals	5527
USSR, scientific abstracts	1006, 2732, 5170, 9036, 12580, 16245, 20056, 20115, 20343-344, 20365, 21394, 21619, 21642, 21646	May, E. C., satellite determination of high-altitude water vapor	14783
variation problems and fluctuation escape, Soviet papers	16430	May, Robert F., predicting outcrops of spoil banks	772
see also Calculus—Equations—Integration (mathematics)—Logic (symbolic and mathematical)—Numerical calculations—Optimal processes—Variables (mathematics)		May, Timothy C.:	
Mathematics Department of Hungarian Academy of Sciences, report of leadership, 1963	12586	asbestos	18657
Mather, Stephen T., Interpretive Training and Research Center, see Stephen T. Mather Interpretive Training and Research Center		perlite	18676
Mathers, Aubra C., morphological, etc., properties of southern Great Plains soils	1680	pumice	20497
Mathews, M. J., field moisture content investigation	4671	Mayaguez, P. R., area redevelopment manpower report	17934
		Mayer, William V., natural mammalian hibernation, bibliography	19145
		Maynard, Zollie, State school laws and regulations for health, safety, driver, outdoor and physical education	17924
		Mayo, Alton P., accuracy of navigation in various regions of earth-moon space with various combinations of onboard optical measurements	18774



# INDEX 1964

	Entry		Entry
Mayo, Charles H., commemorative, 5-cent Doctors Mayo postage stamp (poster)-----	21832	Measuring instruments—Continued <i>see also</i> Electronic measuring instruments.	
Mayo, Doctors William and Charles, commemorative stamp, dedication (address)-----	18876	Measuring pressure of high-intensity pulse jets by tensometer method, USSR-----	9194
Mayo, Robert F., magnetically rotated electric arc air heater-----	1463	Measuring tools, <i>see</i> Measuring instruments.	
Mayo, William J., commemorative, 5-cent Doctors Mayo postage stamp (poster)-----	21832	Measuring wool by staple length recorder-----	13590
Mayonnaise: and related products, 1963-----	17070	Meat: foreign agriculture circulars-----	3520
current industrial reports-----	17100	freezing in home-----	1701
Mazurov, K. T., report to Plenum of Central Committee, CPSU, Nov. 19–23, 1962-----	1120	Meat: imports, restrict— hearings-----	10418, 14135
Mazza, Gary E., testimony, hearings, MDTA, <i>see</i> Manpower.	8456	reports-----	14098, 15544, 21194
Mead, Robert L., power from radio-isotopes-----	15292	industries, review of 1963, outlook for 1964-----	15299
Mead, Walter J., mergers and economic concentration in Douglas-fir lumber industry-----	14331	inspection and labeling, Agriculture Dept. program-----	1693
Mead, Lake: forecast of inflow-----	3639	inspection procedures manual-----	20904
water supply outlook and forecast of inflow-----	3639	inspection service, film for TV use, livestock and meat production improvement, Rumania, review of government decrees-----	935
Meade, Robert M., removal of water and rearrangement of particles during compaction of clayey sediments, review-----	14346	livestock and meat situation-----	3687
Meal, meat, production-----	18989, 20847	market news weekly summary and statistics-----	3688
Meals, <i>see</i> Food.		meal production-----	18989, 20847
Mean electron density variations of quiet ionosphere-----	3047	vitamin supplemented salmon diets, protein and calorie levels, feeding studies-----	8623
Means, James, and problem of man-flight, 1882–1920-----	18944	prepared products, industry wage survey-----	13073
Means, James H., James Means and problem of manflight, 1882–1920-----	18944	processing ration issue, Army technical manual-----	17053
Measles, general information-----	15048	production— monthly report-----	3342
Measured transfer functions of pilots during 2-axis tasks with motion-----	9582	United States by months-----	11647
Measurements: barometric pressure, Weather Bureau, history-----	13530	retail sales of broilers and meat as affected by price, display area, and newspaper advertising-----	14171
efflux patterns and flow rates from cylindrical tubes in free-molecule and slip flows-----	20606	statistics, 1962, supplement, 1963, sureness is yours with inspected meat-----	16970
hydraulic, apparatus and techniques for bedload-----	19797	USSR industry, threshold of season, translation-----	16966
industrial productivity, data-----	14707	<i>see also</i> Packing industry.	20326
moire fringe measuring system for far infrared interferometric spectrometer-----	4254	Meat animals, <i>see</i> Livestock.	
radio technical, investigations, USSR studies-----	16036	Meat inspection Division: activities, summary 1964-----	19055
range measurements, real-time compensation for tropospheric radio refractive effects-----	20530	chemical evaluation and control fact sheet MID-CEC (series)-----	11742
results from full-scale measurements of midship bending stresses on 2 C4-S-B5 dry cargo ships operating in North Atlantic service-----	18938	facilities and equipment fact sheet (series)-----	18
vacuum and low pressure, bibliography and index, errata-----	13273	marking and labeling program-----	1693
Measures, <i>see</i> Weights and measures.		Meat inspectors, standards of performance, processing and non-processing operations-----	13574
Measuring capacity to work, report on seminar for physicians in Rhode Island-----	7734	Meat packing plants, <i>see</i> packing industry.	
Measuring instruments: automation measuring devices, USSR studies-----	21492	Mechanical devices to expedite boll weevil rearing in laboratory-----	4189
Federal item identification guides for supply cataloging-----	12290	Mechanical engineering: Navy design manual, changes-----	3198
supplements-----	3471	structural, in shore establishments, Yards and Docks Bureau, design manual, change-----	20890
pore pressures in concrete, literature review, etc-----	19665	Mechanical engineers, career opportunities, Veterans Administration-----	20870
weighing and measuring instrument, specifications, etc-----	20637	Mechanical fans: current industrial reports-----	3391
		summary 1963-----	8116
		Industry, review of 1963, outlook for 1964-----	6009
		Mechanical mobility: Mobility Equipment Center, Army, commodity list-----	11834
		traffability and mobility research, Army reports, list-----	12353
		troop topics-----	11843

# JANUARY-DECEMBER

try	Entry
	Mechanical mobility—Continued
	Waterways Experiment Station research capability..... 635
	Mechanical properties of Echo II laminate..... 16690
194	Mechanical properties of fibrous composites..... 11352
	Mechanics (persons):
590	aviation structural mechanic H 1 & C, Navy training course..... 16786
520	career information, your job as repairman or mechanic..... 20449
701	construction mechanic 3 & 2, Navy training course..... 13315
	employment outlook—
135	air-conditioning and refrigeration mechanics..... 9430
194	appliance servicemen..... 9431
	automobile and diesel..... 7387
299	elevator constructors..... 7383
693	industrial machinery repairmen..... 9435
904	optical laboratory mechanics..... 9425
688	television servicemen..... 9436
	Mechanics (science):
	abstracts pertaining to Communist China in Soviet journals..... 2513
935	elements of automation of investigation of higher nervous activity, USSR study..... 16539
3687	mechanics of motion, Naval Guided Missiles School, trainee's manual..... 16792
3688	answer sheets..... 16793
0847	mechanisms of living creatures continue to puzzle engineers..... 2642
8623	Mechanism of autoregulation in intact kidney..... 13734
3073	Mechanism of desalination by reverse osmosis..... 6835
7053	Mechanism of gunshot injuries of the extremities, USSR..... 20024
3342	Mechanization:
1647	and automation in industrial management, USSR studies..... 12929
4171	blue crab industry..... 14269
6970	development of mechanized apparatus for processing of oceanographic observations, conference, USSR..... 10893
6966	farm mechanics instruction, training program suggestions..... 15849
0326	harvesting and orchard handling of fruits..... 5796
9055	information processing operations, USSR study..... 6964
1742	see also Automation.
18	Mechanized equipment, see Machinery.
1693	Mechtly, E. A., international system of units, physical constants and conversion factors..... 20540
13574	Medal of Honor:
	hospital, domiciliary, and medical care for recipients—
	hearing..... 14154
4189	law..... 17340
3198	reports..... 15558, 15750
	pensions to holders, based on non-combatant duty—
	law..... 21143
20890	reports..... 10276, 14073, 19494
	recipients, 1863-1963..... 15814
	Medals:
20870	commemorative—
3391	admission of Indiana—
8116	law..... 264
6009	report..... 457
	International Ladies' Garment Workers' Union health center anniversary—
	law..... 265
11834	report..... 458
	New York historic shrines, issuance—
12353	law..... 6173
11843	reports..... 460, 2094

Entry
Medals—Continued
commemorative—Continued
200th anniversary of founding of St. Louis, Mo.—
law..... 6181
reports..... 2096, 4350
see also Decorations of honor—
also names of medals, or persons to whom medals are to be presented.
Medeiros, Leonor, see De Medeiros, Leonor do Rosario.
Mediation, see Industrial arbitration.
Mediators, examination announcement..... 15362
Medical and dental support..... 9486
Medical care:
administration, and health officer (address)..... 3097
aged persons—
District of Columbia, amend public assistance act, report..... 17752
social security amendments of 1964, hearings..... 17876
social security program, hearings..... 6371
Air Force manuals..... 1733, 11793, 20950
civilian, dependents of uniformed services, manual..... 2254
coordinated home care programs, survey..... 1567
countermeasures against radiation accidents due to equipment damage or breakdown, organization, East German study..... 18324
dependents' medical care program, DoD pamphlet..... 19198
expenditures, public and private, preliminary estimates, 1963-64..... 16862
facilities available to Federal employees injured in performance of duty..... 15861
facility projects approved for Federal aid under Hill-Burton program, register..... 3574
fallout shelters, manual for health workers, etc..... 6068, 11929, 13792
fishing boat owners, restore eligibility—
hearings..... 10324
law..... 17283
reports..... 12086, 13971
health and medical activities, need to realign organizational and management structure, District of Columbia Government, GAO report..... 8726
long term care..... 20762
maternity care utilization and financing, U.S. data, 1950-62..... 16837
Medal of Honor recipients, for non-service connected disabilities—
hearing..... 14154
law..... 17340
reports..... 15558, 15750
medical aid to victims of water accidents, USSR study..... 21652
medical assistance for the aged, State public assistance plans under social security act, staff development provisions..... 12355
medical care in transition..... 13408-409
medical groups, United States, 1959..... 5658
medical self-help training program, Army pamphlet..... 106
medical support, Fleet Marine Force manual..... 9486
number of physician visits, U.S., July 1963-June 1964, current estimates..... 21859
public assistance, vendor payments by type of service, 1963..... 10499

# INDEX 1964

	Entry		Entry
Medical care—Continued		Medical radiology:	
State health departments role in leadership	9726	clinical dosimetry, recommendations of international commission, insert	1491
United States, health status and family income	11584	depression of antibody production after high degree irradiation, USSR study	2489
USSR—		dosimetric measurements in work with radio-active iodine, USSR study	2487
facilities	19964	proton and gamma-radiation, effect on vestibular analyzer function, USSR study	2488
inter-relationship between national blood banks and military medical service, history	7064	Soviet diagnostic, survey of published literature, 1959-63	7093
medical care in RSFSR	9063	thyroid gland irradiation and other radiological studies, USSR articles	21447
specialized medical care	9188	USSR periodical, translations	18519
veterans—		USSR studies	11072
hearings on various bills	12161	Medical record librarians:	
intermediate and nursing home care—		employment outlook	9396
hearings	12278	examination announcement	11953
law	17309	discontinuance notice	11944
report	15749	Medical research, see Medicine.	
Medical conferences in Soviet Union	10868	Medical Research Laboratory, see Naval Medical Research Laboratory.	
Medical corpsmen, Army technical manual	8041	Medical Sciences Division, History and Technology Museum, history	21801
Medical Department, Army:		Medical service, see Medical care.	
preventive medicine in World War II	17056	Medical Service Bureau, Public Health Service, career opportunities	20745
surgery in World War II, activities of surgical consultants	10022	Medical specialists:	
Medical Department, Navy:		Army technical manual	8041
administration	2979	Azerbaijdzhan congress, USSR report	11094
enlist medical program	20461	Medical supplies:	
manuals	7426, 9490, 13100, 14727, 18656	Federal item identification guides for supply cataloging	12294
Medical economics, U.S. statistics, present status and recommendations for additional data	9731	supplements	3475
Medical education, see Medicine.		pararescue kit	9979
Medical examinations, see Physical examinations.		Medical technicians, Veterans Administration, career opportunities	5744
Medical examiners:		Medical technologists:	
aviation, guide	19270	employment outlook	9396
aviation, list	10041	examination announcement	6103
Medical facilities, see Hospitals.		amendment	8158
Medical groups, United States, 1959	5658	supplements	4395, 21062
Medical illustrators, see Illustrators.		Veterans Administration, career opportunities	5744
Medical industry:		Medical treatment, see Medical care.	
prospects, tasks and cooperation, USSR study	14511	Medical X-ray protection up to three million volts, insert	13268
USSR periodical, translations	21510	Medical zoology, see Zoology.	
Medical instruments and apparatus:		Medicine:	
biological research and medical diagnostics, USSR study	16156	Academy of Medical Sciences, USSR, vacancies in institutes, announcement	18571
Federal item identification guides for supply cataloging	12294	AEC program, hearings	8235
supplements	3475	AEC research and development in progress	4301, 13711
housings of electronic equipment, USSR study	6943	aeromedical reviews	4258, 7997-98, 11805, 13649
manufacturing industry, prospect for development in USSR	7001	aerospace—	
recent developments, USSR study	16265	advances in bionics, USSR study	16443
ultrasonic and electronic medical devices, USSR studies	16211	bibliography	18668, 18728, 20539, 21744
USSR, new designs of apparatus and equipment	10884	dysbarism	13646
Medical laboratories:		EEG in aircrew and astronaut selection	7998
clinical mycology procedures, Air Force manual	1733	lectures	16999
virology, procedure	8040	research studies bibliography	13732
Medical literature:		Aerospace Medical Research Laboratories, technical documentary reports	51, 9967, 11784-785
translations—		atomic energy and medical sciences (remarks)	19257
Jan. 1959-June 1962, subject index	18917	auditory research, USSR studies	11139
July-Dec. 1962	16755		
Jan.-June 1963	18818		
Medical mycology, clinical, laboratory procedures, Air Force manual	1733		
Medical Nutrition Laboratory, see Army Medical Research and Nutrition Laboratory.			
Medical officers, examination announcement, amdots	4376, 13795		
see also Physicians.			
Medical photographers, see Photographers.			

# JANUARY-DECEMBER

	Entry
Medicine—Continued	
Belorussian medical workers, trade union conference.....	1094
bibliography of medical reviews.....	13294
books, classification, National Library of Medicine.....	11457
cardiovascular research opportunities in Israel, medical research scientists report.....	20647
clinical and professional educational opportunities at NIH.....	7587
clinical, USSR studies.....	21411
consultation in vocational rehabilitation.....	9873
Cuba and Soviet medicine, USSR study.....	1270
cybernetics—	
and medicine, USSR study.....	2557
application, USSR study.....	9128
use, USSR articles.....	9023, 2745
uses, present and future, USSR study.....	4961
Czechoslovak Ministry of Health research plan, 1964-65.....	1203
Czechoslovakia, postgraduate medical training development.....	20232
disinfestation, utilization of agricultural sprayers, dusters and aerosol generators.....	2688
East European journals, abstracts.....	904
948, 967, 977, 1044, 1084, 1099, 1173, 1261, 1291, 1309, 1347, 1353, 2483, 2633, 2666, 2687, 2726, 2762, 2805, 2853, 2855, 4963, 4976, 5019, 5035, 5105, 5184, 5224, 5249, 5274, 5293, 5317, 5338, 5348, 5353, 5372, 5398, 6880, 6899, 6925, 6949, 6976, 6985, 7008, 7026, 7042, 7112, 7120, 7196, 7205, 7254, 7339, 8890, 8895, 8921, 8950, 8971, 8990, 9052, 9073, 9101, 9131, 9156, 9170, 9206, 9237, 9287, 9306, 9367, 10729, 10754, 10779, 10815, 10871, 10874, 10959, 11041, 11050, 11065, 11089, 11184, 11196, 12587, 12598, 12613, 12636, 12654, 12680, 12719, 12740, 12845, 12856, 12888, 12910, 13008, 14422, 14435, 14470, 14564, 16003, 16010, 16081, 16108, 16122, 16268, 16286, 16318, 16361, 16376, 16444, 16486, 16543, 18214, 18223, 18250, 18278, 18312, 18337, 18374, 18387, 18429, 18434, 18455, 18466, 18476, 18490, 18526, 18557, 19927, 19981, 19983, 20125, 20156.	
education on drug therapy, etc., hearings.....	19598
electronics, achievements relating to clinical problems, USSR study.....	11045
Federal medical and health-related programs, special analysis.....	142
film reference guide.....	18898
forensic medicine of revolutionary Cuba.....	21606
future international meetings, world list.....	4167
health frauds and medical quackery affecting the elderly, hearings.....	14122, 15788, 17862
hormones use, USSR study.....	18293
Hungarian Academy of Sciences, Medical Department leadership report.....	21610
Hungary—	
General Assembly of Forensic Medicine Section of Pathologists, Anatomists of Medical and Public Health Workers Union.....	20389

	Entry
Medicine—Continued	
Hungary—Continued	
medical science and social public health activities, relationship.....	21588
index medicus.....	3583
journals indexed, list—	
Jan. 1963.....	7595
Jan. 1964.....	7596
inflight loss of consciousness, case report.....	4318
instruments and apparatus for biological investigation and medical diagnostics, USSR study.....	18340
Kentucky program on medical aspects of driver limitation.....	20760
man, medicine, and work, historic events in occupational medicine.....	7699
medical conferences in Soviet Union.....	10868
medical education facilities, planning considerations and architectural guide.....	13403
medical education planning, hospital and medical facilities series.....	13403, 16839
medical newsletters—	
Aviation Medical Service.....	3715
Medicine and Surgery Bureau.....	3714
medical research—	
normal volunteer program of NIH Clinical Center.....	1504
Veterans Administration—	
indemnification of research contractors—	
law.....	17292
report.....	15753
report.....	12159
medical subject headings.....	3583
medicine and dialectical materialism problems, USSR study.....	2655
monitoring, use of automatic logical devices, USSR study.....	10741
National Library of Medicine, services, etc.....	16756
Navajo Reservation, medical practice.....	20763
Navy—	
ensign medical program.....	20461
statistics, trends and facts.....	4055
pachycarpine poisoning in clinical practice.....	21551
peaceful atom, USSR study.....	19949
plastic bags use in medical practice, USSR study.....	18384
practical medicine in USSR.....	14567
preventive, in World War II.....	17056
preventive, vector control, naval manual.....	11310
problems related to development of chemistry, USSR study.....	20374
radioelectronics in space medicine, USSR study.....	78384
research for health at NIH, report.....	16751
rheumatic fever and its prevention.....	20752
role of biophysics, chemistry and cytology in development, USSR study.....	1220
Rumania, conferences to be held in 1964, etc.....	7073
School of Aerospace Medicine, technical documentary reports.....	70-79, 1742-49, 4259-60, 5895-5911, 7999-8006, 9986-88, 11806-808, 13647-651, 15236-242, 17009-15, 19177-186, 20973.
Soviet and bloc medical activities, developments.....	4910
space—	
bibliography.....	1797
effects of prolonged exposure to oxygen at total pressure of 190 mm. Hg.....	71



# INDEX 1964

	Entry		Entry
Medicine—Continued		Mediterranean Sea :	
space—Continued		contributions to hydrology of	
flight, medical aspects.....	16658	Africa and Mediterranean	
USSR studies.....	12900	region (series).....	6823-24
USSR translations.....	18534	lights and fog signals, list.....	5578
sport, electrocardiographic method		16780, 21814	
of examination, USSR study.....	2876	new data on bottom relief, USSR	
tranquillizing, analeptic and vasodil-		study.....	6886
ating drugs effect on physical		notice to mariners.....	3800
work capacity and orthostatic		radio navigational aids.....	5579
tolerance.....	13738	14993, 20675	
usc—		radio weather aids.....	13313, 20677
humane atom and radioisotopes		sailing directions.....	1521, 7632, 18840
in treatment of diseases (re-		tide tables.....	13813
marks).....	11871	Meditsinskaya promyshlennost' (peri-	
optical quantum oscillators, prospec-		odical) :	
tical, USSR study.....	5308	translations.....	21510
surgical practices, USSR studies.....	12919	Meditsinskaya radiologiya (periodi-	
USSR—		cal) :	
Academy of Medical Sciences—		translations.....	2771, 18519
candidates, list.....	929	Medium-data-rate digital telemetry	
herald, translations.....	21519	system.....	14859
nominations.....	1020, 1097	Medium resolution infrared-pulse	
vestnik.....	12595	code modulation telemetry,	
All-Union Scientific-Research In-		see Telemetry.	
stitute of Medical and Medical-Technical Information, or-		Medland, Francis F., peer rating sta-	
ganized.....	2714	bility in changing groups.....	13686
conferences on medicine and biol-		Meet buyers for 400,000,000 new	
ogy.....	2498	customers.....	4849, 14371
great medical encyclopedia, transla-		Meeting challenge of changing skills.....	10479
tions.....	2581	Meetings, see Conference, congresses,	
2806, 2814, 18419, 20136, 21599.		etc.	
herald of Academy of Medical Sci-		Megafossils, see Fossils.	
ences (periodical).....	14549	Mehra, George L. :	
investigations.....	12795	addresses, etc.—	
medical conferences, reports.....	1090	Oct. 31, 1963.....	1698
medical education.....	18154	Nov. 12, 1963.....	5863
medical industry, progress, transla-		Nov. 13, 1963.....	5860
tions.....	19958, 20109	Nov. 25, 1963.....	5802
medical institutes, work per-		Dec. 2, 1963.....	5822
formed, reports.....	6994	Dec. 5, 1963.....	5821
medical research, studies.....	10969	Dec. 6, 1963.....	5823
medical sciences, progress.....	20051	Jan. 8, 1964.....	7924
medical scientific meetings.....	19952	Jan. 13, 1964.....	7908
medical training of doctors, Com-		Feb. 6, 1964.....	7915
munist indoctrination.....	9196	Feb. 21, 1964.....	7916
recent advances, translations.....	20113	Feb. 24, 1964.....	7913
scientific abstracts.....	1335	Mar. 3, 1964.....	11775
2657, 5107, 5283, 7162, 8996,		Apr. 20, 1964.....	11747
10940, 14424, 16092, 18194.		Sept. 15, 1964.....	20923A
translations from Byulleten' ek-		Melching, William H., handbook for	
sperimental'ney biologii i med-		programmers of automated in-	
itsiny.....	16142	struction.....	11837
wave therapy, equipment, meth-		Melehan, James B., effect of nuclear	
ods, etc.....	6943	radiation on ceramic reactor-	
Yugoslav Congress for industrial		fuel materials.....	5982
medicine.....	7109	Melekess, Russian SFSR, city for	
see also Drugs—Veterinary medi-		peaceful uses of atomic en-	
cine.		ergy.....	7221
Medicine and Surgery Depart-		Mellor, Malcolm :	
ment, Veterans Administra-		snow and ice on earth's surface.....	21278
tion :		undersnow structures, N-34 radar	
Chief Medical Director, authority		station, Greenland.....	17941
to act on recommendations of		Melons, acreage marketing guides.....	3, 5784
disciplinary boards—		Melpar, Inc., overpricing of B-58 air-	
hearing.....	542	craft recording systems, GAO	
law.....	1936	report.....	6775
report.....	2192	Melshelmer, E. S., spillway for Omaha	
program guide, manual (series).....	11675	Dam, Missouri River, S. Dak.....	19663
Medicine Bow National Forest :		Melting :	
Pole Mountain district, retrocede		arc, with consumable electrode,	
jurisdiction to Wyoming—		crystallization of ingots, USSR	
law.....	17353	study.....	5370
report.....	15536	electron-beam system for metals.....	7430
Medicines :		electroslog, large-diameter consum-	
action mechanism of medicinal sub-		able electrodes, USSR study.....	10989
stances as biological problem,		metal, with electron beam, USSR	
USSR study.....	2660	study.....	20420
medicinals, etc., from fluorine com-		pyrophoric hydrogen-reduced iron	
pounds, USSR study.....	927	powder for production of steel.....	9522
Medina, Miguel A., effects of arginine,		titanium slags, investigation of	
1-glutamate, and pyridoxine on		electric melting, USSR	
toxicity of aeroline.....	19182	studies.....	5238
		Melville, George S., Jr., radioprotec-	
		tion with AET-cysteine in	
		rhesus monkey.....	19179

Entry

4-24  
578,  
1814

3886  
3800  
579,  
9675  
9677  
8840  
3813

1510

8519

4859

3686

4371  
0479

1698  
5865  
5860  
5802  
5822  
5821  
5823  
7924  
7908  
7915  
7916  
7913  
11775  
11747  
923A

11837

5982

7221

21278

17941  
5784

6775

19063

5370  
7430

10089

20420

9522

5238

19179

Entry

Member banks, <i>see</i> Federal reserve member banks.	
Membranes:	
E. coli cells, system, USSR study...	20255
flat stretched, wrinkled by rotation of attached hub behavior...	18781
nerve cells, nuclear potential, USSR study...	11227
permelective, test manual...	8798
technology, saline water desalination bibliography...	848
tumor cell, antibodies to specific antigen, USSR study...	10801
Memorandums, <i>see</i> names of departments, etc., issuing memorandums.	
Memorial certificates, Veterans Administration program, established without legal authority, GAO review...	10609
El Memorial Nacional de Coronado...	3061
Memorial services:	
Baker, Howard H...	19368
Doyle, Clyde G...	4415
Gavin, Leon H...	6131
Green, William J., jr...	13837
Kefauver, C. Estes...	6132
Kennedy, John F...	2132
print as Senate document, report	2198
Nygaard, Hjalmar C...	4416
Walter, Francis E...	231
<i>see also</i> National monuments and memorials— <i>also</i> names of memorials— <i>also</i> names of persons to whom memorials are erected.	
Memory:	
high density optical memory drum...	11783
information and memory, USSR study...	9295
long and short term, interaction in human data handling...	5891
short term—	
and perception under work load stress	20706
non-equivalence of query and message items	9981
recall, effect of various modes of rehearsal	20705
Memory devices:	
Crowe elements, super conductive, USSR study...	16326
ferrite cores, USSR study...	16154
high speed computer memories, USSR study...	16038
Memphis, Tenn.:	
aquifer systems in area, hydrology...	19801
Board of Trade Clearing Association futures trading and open contracts in soybean meal and cottonseed meal...	3549
bridge over Mississippi River, designate Clifford Davis Bridge, report	8347
motor carrier accident...	8840
occupational wage survey...	11276
principal electric facilities, map...	679
Memphis lock and dam, change name, hearings	2123
Men:	
adult, lifetime occupational mobility	10063
men and weapons, North Vietnam	2606
Menasha, Wis., consumer expenditures and income, 1961...	11272
Mendelson, Alexander, elastic stress distribution in finite-width orthotropic plate containing crack	9607

Entry

Menhaden:	
age and size composition of catch along Atlantic Coast of United States, with brief review of commercial fishery...	18029, 19738-739
firms manufacturing menhaden products, list...	758
Menhinick, Edward F., insect species in herb stratum of sericea lespedeza stand, AEC Savannah River project...	1781
Menninger, William C., address...	10086
Menominee Range, iron ores, anionic flotation of silica...	9516
Menopause, general information...	20750
Mental defectives, <i>see</i> Mentally retarded.	
Mental diseases:	
care, treatment, etc., of mentally ill in D.C.—	
law	19405
reports	6476, 21195
pathopsychological research in active therapy of psychoses, USSR study...	11142
psychoses, experimental, produced by anticholinergic hallucinogens, Czechoslovak study...	7072
Mental disorders, <i>see</i> Mental illness.	
Mental health:	
advances in community programs and services	11444
career development program, conference proceedings...	11448
comprehensive community center facilities, architecture, bibliography	9643
mental health in child health conference, attitude study project of New York City Health Dept., evaluation...	17117 16744
monograph series	
nurses, psychiatric-mental health trainee stipends	13289
opportunities for nursing careers	3113
personnel, State, directory	16742, 20648
planning grants, State proposals 1963, digest	5555
professional status of personnel supported by NIMH training grants	1501
project grants, NIMH program	15167
public assistance, convalescent leave from mental hospitals, agreements, etc., guides	8524
State planning, 1964, progress reports, digest	21791
State salary ranges	10667, 19807
training grant awards, Public Health Service, 1963 funds...	13283
training grant program, 1962, statistical sourcebook	1503
Mental health center, <i>see</i> Mental institutions.	
Mental Health Commission of District of Columbia:	
continue—	
law	19405
reports	6476, 21195
Mental hospitals:	
convalescent leave for patients, public assistance, agreements, etc., guides	8524
psychiatric aides, highlights from survey	11447
<i>see also</i> Mental institutions.	
Mental illness:	
drugs, testimony, hearings	8445
hire mentally restored, memo for employers	7369
new approaches	4826, 18155
project grants, NIMH program	15167
veterans in VA hospitals—	
Oct. 31, 1961	11454
Oct. 31, 1962	20652

# INDEX 1964

Entry	Entry
Mental institutions:	Mentally retarded—Continued
architecture of mental health facilities, bibliography-----	children—Continued
children's unit, therapeutic use of student volunteers-----	prevention through improved service, Social security act amendments-----
comprehensive community mental health center-----	teaching, automated procedures, clinical team looks at phenylketonuria-----
mental hospital data, processing guide-----	combat retardation through maternal, etc., health program, comments-----
mental hospital statistics, model reporting area, 12th annual conference, presentations of panel members-----	construction grants for mental retardation research centers-----
patients, 1961-----	educable, vocational upgrading, North High work-study program-----
patients, 1962-----	employee, information for supervisor-----
private-----	girls, experimental training programs-----
mental hospitals and general hospitals with psychiatric facilities-----	Health, Education, and Welfare Department program, 1964-----
patients, 1961-----	hearings-----
patients, 1962-----	law-----
mentally retarded-----	reports-----
patients, 1961-----	Health, Education, and Welfare Department program, 1965-----
patients, 1962-----	HEW's response to recommendations of President's panel-----
public, mentally retarded-----	hire mentally retarded worker, memo for employers-----
patients, 1961-----	implementation of mental retardation programs, report to the President-----
patients, 1962-----	interviewing guides for specific disabilities-----
State and county mental hospitals-----	mental retardation, its biological factors, hope through research, new approaches to mental retardation-----
listing, 1962-----	physician and parents of retarded child-----
patient movement data, 1960-----	President's Panel on Mental Retardation, task force report on-----
patient movement data, 1961-----	behavioral and social research-----
patients, 1961-----	coordination-----
patients, 1962-----	private institutions-----
State hospitals, etc., directory-----	patients, 1961-----
team relations with psychiatric patients-----	patients, 1962-----
Mental tests, military service, report on young men found unqualified-----	program of Division of Chronic Diseases-----
7678	programs, nutrition services institute, report-----
Mentally ill:	progress in research, summary-----
constitutional rights, care, treatment, hospitalization in D.C.—law-----	progress in their rehabilitation-----
reports-----	public health nurse in program-----
6476	public institutions-----
convalescent leave from mental hospitals, public assistance payments, guides-----	listing, 1962-----
8524	patients, 1961-----
ex-mental patients, halfway houses, helping, rehabilitation program in State hospital, etc-----	patients, 1962-----
5748	rehabilitated, selected characteristics-----
hospital team relationship, your job and psychiatric patient-----	report of mission to USSR-----
11676	State departments dealing with mental health, directory-----
Loudon County, Va., found on Federal reservations, commit to St. Elizabeths Hospital-----	State interagency planning, guideline-----
law-----	State laws and regulations, checklist-----
17364	training, special needs-----
report-----	White House Conference on Mental Retardation, proceedings-----
17742	7857
private mental hospitals and general hospitals with psychiatric facilities-----	Menzel, Donald H., Conference on Non-Linear Processes in Ionosphere, Dec. 16-17, 1963-----
patients, 1961-----	11438
patients, 1962-----	Mercamine, radioprotective action on radiosensitivity of rats, effectiveness, USSR study-----
17588	14471
16749	Merced River:
State and county mental hospitals-----	development, flood control, engineer report-----
patient movement data, 1960-----	departmental edition-----
16746	document edition-----
patient movement data, 1961-----	15873
21794	15409
patients, 1961-----	
3057	
patients, 1962-----	
14950	
statistics for mental hospitals, model reporting area, 12th annual conference, presentations of panel members-----	
13281	
Mentally retarded:	
bibliography of world literature on mental retardation-----	
5634	
children-----	
clinic, orientating parents-----	
11919	
closed short-term group as treatment adjunct for parents-----	
13776	
feeding, guide for nurses working with child and his family-----	
10079	
guide for public health nurses-----	
11918	
nursing role in counseling parents-----	
10081	

# JANUARY-DECEMBER

Entry

3143  
3321

5330

2128

1790

612

9012

3785

4570

5179

4536

9666

8730

7370

4358

2293

8902

8155

6055

5029

3088

9645

6750

5059

1829

4953

9870

9082

6747

5558

6748

6911

9703

4948

3410

5067

0427

7857

1438

4471

5873

5409

Entry

Mercer, Walter A., radiochemistry techniques in food processing research	19243
Merchandising:	5682
automatic merchandising industry, retail, bibliography	15080
Merchant marine:	
act of 1920, continue authority for suspension of Jones act, hearing	2235
act of 1936, amend—	
hearings	2235
10331, 12257, 15596, 19594	1954
laws	1956, 15887, 17269, 17337, 19403
reports	489, 2058-59, 10237, 12049, 15551, 15562, 15712, 14051
American, attain and maintain merchant marine adequate to our needs (remarks)	10131
challenge constantly renewed (remarks)	14724
Federal programs for maritime problems (remarks)	11972
golden gate to tomorrow's American merchant marine (address)	14723
history of U.S. merchant marine	13099
labor legislation, amend act, Department reports on H.R. 1897	10332
marine industry, its role in American history (remarks)	17161
maritime cargo transportation, future horizons (remarks)	18654
maritime industry as unique opportunity in American tradition (remarks)	13097
maritime matters—	
public liability for damage caused by N.S. Savannah, agreement with Ireland	20845
use of—	
Belgian ports and waters, by N.S. Savannah, agreement with Belgium	5699
Danish ports and waters, by N.S. Savannah, agreement with Denmark	18975
Norwegian ports and territorial waters by N.S. Savannah, agreement with Norway	13481
Spanish ports and territorial waters by N.S. Savannah, agreement with Spain	20825
Swedish ports and waters by N.S. Savannah, agreement with Sweden	18976
United Kingdom ports and territorial water by N.S. Savannah, agreement with Great Britain	20832
maritime resources for security and trade, Maritime Evaluation Committee, final report	10833
maritime safety digest (periodical)	3708
merchant marine our greatest resource (remarks)	20460
miscellaneous legislation, hearings	15596
national answer (remarks)	20458
ownership changes, etc., of vessels, supp	3750
progress and future needs (remarks)	19356
statistics, 1964	21245
Yugoslav, maritime trade and 7-year plan	11224
see also Shipbuilding—Shipping.	

Entry

Merchant Marine and Fisheries Committee, House:	
calendar	3654
committee prints	10829
10332-333, 12149, 14012, 19519	
hearings	405, 2116, 4504, 6327-68, 8390, 10330-331, 12148, 14011, 15596-598, 19518
reports	2001, 2058-59, 6273-74, 10216, 10229, 10234, 10237, 13927, 13956, 13977, 15551-552, 15562, 17532, 17546, 17606
Merchant Marine Council, proceedings	3939
Merchant vessels, see Ships.	
Mercury:	
continuous-circuit leaching, cost estimates and optimum conditions	14744
deposits, USSR studies	9205
deterioration of some aluminum alloys in its presence	7470
mineral industry survey, quarterly	3719
minerals yearbook chapter	16630
quicksilver deposits of New Almaden District, Santa Clara County, Calif.	8765
strain gauge, calibration	19148
vapor flowing through nozzles, expansion and condensation behavior	18789
Mercury (planet):	
strength and structure	9616
Mercury vapor lamps, see Electric lamps.	
Meregghetti, Maria, relief	452, 1904
Mergers, see Business consolidations.	
Meriones erythraeus gray, see Gerbils.	
Meristems, growth and development in woody plants	42
Merit system, see Civil service.	
Merkel, Edward P., hydraulic spray applications of insecticides for control of slash pine cone and seed insects	18084
Merlin division, see Rogue River Basin project.	
Mermelstein, B., microminiature amplifier with thin-film passive parts	13871
Merrell, Theodore, Jr., ecological studies of sockeye salmon and related limnological and climatological investigations, Brooks Lake, Alaska, 1957	21318
Merriam, Charles W.:	
Cambrian rocks of Pioche mining district, Nev.	19789
geology of Cerro Gordo mining district, Inyo County, Calif.	4788
Merrick, Samuel V., address, Nov. 10, 1963	1363
Merrill, Robert H., stress determination by flatjack, etc., method	9517
Merritt, Sophie E., world history 2	6537
Merritts, William M., removing methane (degasification) from Pochontas no. 4 coalbed, W. Va.	1443
Mertes, John E., store location	9766
Merwinite, low-temperature heat capacities and entropies at 298-15° K.	5489
Merzlotnye Issidovaniya (periodical): translations	5015
Mesa Verde National Park:	
boundaries, revise—	
law	1964
report	2214



# INDEX 1964

	Entry		Entry
Mesabi Range:		Metal mines and mining:	
iron ores, anionic flotation of silica	9516	estimating metal content and ton-	
iron phyllosilicates	9511	nage of ore body from diamond-	
lean iron ores, feasibility of Krupp-		drill-hole data	9502
Renn process for treating,		silicosis in metal mining industry,	
digest	13665	1958-61, revaluation	15066
Mesidine, <i>see</i> Benzine.		Metal shapes, <i>see</i> Shapes (metal).	
Mesilla Valley, lower, ground water		Metal sheeting, <i>see</i> Sheet metal.	
resources	4815	Metal stamping:	
Mesosphere:		hot stamping of titanium alloy	
polar night, acoustic heating	1456	blanks, USSR study	20218
stratosphere and mesosphere, USSR		sintered aluminum powder sheet,	
study	1232	problems, USSR study	21491
Messengers:		Metalforming brakes, metal-bending	
Capitol pages, residence—		brake facilitates lightweight,	
hearing	546	close-tolerance fabrication	20553
report	14087	Metal-working machinery, <i>see</i> Metal-	
staff report	10436	working machinery.	
congressional pages, committee to		Metallic films:	
study welfare and education		barium, gold, and silver, high speed	
of, create, report	19454	vacuum performance of ball	
employment, pursuant to fair labor		bearings lubricated with	13232
standards act	16917	gold plated miniature ball bearings	
Supreme Court pages, residence—		for high speed vacuum per-	
hearing	546	formance	1478
report	14087	Metallography, dislocation structures,	
Messes:		USSR investigations	1330
administration deficiencies at Dow		<i>see also</i> names of metals.	
Air Force Base, Maine, GAO		Metallurgical slime, hydrometallurgi-	
report	6763	cal recovery of manganese from	
ashore, Navy manual, change	13317	manganiferous slimes	7440
Metabolism:		Metallurgists, research opportunities,	
amino acid imbalance in cold ex-		examination announcement	8156
posed rats	4249	Metallurgy:	
cerebral arteriovenous differences in		abstracts pertaining to Communist	
metabolic substrates during		China in Soviet journals	2692
hyperthermia	17015	alloys, USSR studies	12718
comparison of mineral excretion		arc-discharge, USSR translations	13011
(calcium and iodine) in arm		copper powder from leach solutions	
and total body sweat	19223	after precipitated with iron	10637
copper in hepatolenticular degen-		East European scientific abstracts	21434
eration, USSR study	16343	ferrous—	
endocrine and metabolic effects of		need for higher quality metal,	
short-duration hyperoxia	8001	USSR	
energy, level in sponges, USSR		USSR industrial development,	
study	1241	translations	
energy, research progress report	9919	1072, 1127, 1169, 1316, 1349,	
gas, cold-blooded animals, USSR		2504, 2835, 2923, 5009, 5050,	
studies	7061	5067, 5111, 5197, 5221, 5299,	
metabolic control mechanisms in		5314, 5331, 5384, 5413, 7133,	
animal cells	13284	8891, 8947, 9134, 9149,	
metabolism and ionizing radiation		10751, 10896, 10954, 10990,	
processes, summary	4262	11093, 11138, 11211, 12680,	
metabolism during radiation inju-		12676, 12838, 12865, 14491,	
ries, USSR study	20029	16002, 16306, 16324, 16359,	
protein, effect of cold	4251	16254, 16306, 16324, 16359,	
regulation problem, USSR essays	21600	16434, 16556, 18206, 18260,	
ribonucleic acid and its nucleotides		18408, 18531, 18565, 18971,	
in liver development, effect of		20097, 20267, 20307, 20378,	
cortisone	16732	21427, 21525, 21637.	
RNA in cells of human malignant		fundamental and applied research	
tumor, radiation effect, USSR		and development	5971
study	14574	Hungarian Ministry of Metallurgy	
USSR studies	14620	and Machine Industry, organi-	
<i>see also</i> Plants.		zation and operational code	16538
Metachromatic reaction of nucleic		mechanization and automation of	
acids (DNA and RNA), native		metallurgical production,	
and irradiated by ultrasound,		USSR study	18583
USSR	10973	metallurgical shop—develops new	
Metal bars, <i>see</i> Bars (metal, etc.).		technology, USSR	20378
Metal castings, <i>see</i> Castings.		Mines Bureau, Albany Metallurgy	
Metal coating:		Research Center, progress re-	
bibliography	7813	ports	1782, 8088, 13719, 17064
titanium and titanium plating,		nonferrous—	
applying coatings on, USSR		Armenian enterprises, inadequate	
study	9187	utilization of production capac-	
Metal cutting:		ities	16112
machine tools, determination of		USSR industrial development,	
service life, USSR study	10997	translations	
tool industry, review of 1963, out-		2656, 4891, 4990, 5223, 5248,	
look for 1964	6014	6959, 7097, 9054, 9176, 9236,	
Metal foils, indium, with beryllia		10728, 10748, 10772, 11112,	
washer improves transistor		11203, 14507, 14605, 16112,	
heat dissipation	11368	16236, 16291, 16340, 16545,	
		18218, 18329, 18410, 18552,	
		18578, 19903, 20287.	

	Entry
<b>Metallurgy—Continued</b>	
powder—	
physical, principles.....	8008
product, carbide hard alloys.....	4914
strength of metal materials and alloys, normal and high temperatures, USSR.....	2615
USSR studies.....	5247
research and development, opportunities, examination announcement.....	11949
strip rolling and electroslag remelting, USSR study.....	2653
summaries of AEC basic research programs.....	5984
technology review, minerals yearbook chapter.....	11345
USSR—	
conferences.....	890, 12608
pure metals, research, translations.....	5011
scientific abstracts.....	1197, 2697, 5042, 6972, 8973, 9372, 12690, 13015, 14577, 16391, 18376, 20166, 20384.
studies.....	14630
see also names of metals.	
<b>Metals:</b>	
adhesion between atomically clean surfaces.....	7547
bonding in oxide-fiber (whisker) reinforced metals.....	7660
brazing—	
gas-flame, USSR study.....	10965
research presented at colloquium, at 16th congress in Helsinki, 1963.....	18257
cast, mechanical properties, USSR studies.....	16215
commodity data summaries.....	13112
conditioned polymetallic ores, translations.....	20287
consumption and stocks at brass and wire mills, mineral industry survey, monthly.....	3284
cryogenic applications, review.....	11809
cutting, lubricant-coolant fluids and technique of their application.....	82
dry friction theory, Czechoslovakian study.....	2797
East European scientific abstracts.....	21434
effects of purity and structure on recrystallization, grain growth, ductility, tensile and creep properties of arc-melted tungsten.....	21776
electroerosion machining.....	8007
exposed to vacuum and thermal outgassing, adhesion studies.....	14792
identification, guidelines, Air Force pamphlet.....	20951
industries—	
employment and injuries, minerals yearbook chapter.....	20471
review, minerals yearbook chapter.....	2997
technologic trends, minerals yearbook chapter.....	1446
ingot temperatures, problems, USSR study.....	5403
ingots, crystallization during arc melting with consumable electrode, USSR study.....	5370
intermetallic compounds in magnesium-rich magnesium-aluminum-zirconium alloys.....	18632
ionization, USSR studies.....	20252
liquid—	
boiling, literature survey.....	46
corrosion, NASA-AEC meeting, proceedings.....	13155
metal in electromagnetic field, USSR study.....	19988

	Entry
<b>Metals—Continued</b>	
one-dimension free-surface waves interaction with transverse magnetic fields.....	13249
thermal treatment to increase mechanical properties of castings.....	5913
machining, X-ray diffraction analysis of stresses appearing, USSR study.....	2674
melting with electron beam, USSR study.....	20420
metal composites, OTS bibliography.....	9852
metal fatigue and cyclic stress, USSR study.....	14465
metallic materials and elements for flight vehicular structures.....	12303, 14162, 19615
metals and alloys—	
corrosion, USSR studies.....	2659
solid state diffusion.....	11854
minor, minerals yearbook chapter.....	18673
nonferrous, contributions to Brazilian geology (series).....	6796
our heritage of elements (address).....	19261
oxidation resistant coatings.....	48
physics of semiconductors and metals, USSR study.....	20303
powders, explosibility, study.....	18698
rare earth, separation, etc., in zirconium alloys.....	11336
rare metal carbonate masses, magnetometry for studying, USSR study.....	18294
reactive, expendable casting molds for.....	18692
refractory—	
cold and hot working, USSR study.....	6897
equipment for processing in electrovacuum industry, USSR study.....	5208
metal castings, effect of individual features of technological process, USSR study.....	5378
oxide materials, evaluation for use in high-temperature pebble-bed wind-tunnel heat exchangers.....	20615
rapid billet loader aids extrusion.....	13179
scrap, temporary suspension of duties, continue—	
law.....	13874
reports.....	10241, 12238
solder flux leaves corrosion-resistant coating on metal.....	20564
Soviet and Chinese articles, English abstracts.....	3441
strength and super strength, USSR study.....	2813
surface—	
diffusion saturation of metals and coatings seminar, USSR.....	10785
interaction of atomic particles, temperature and deformation, relationships, USSR studies.....	8047
USSR scientific abstracts.....	20072
vacuum diffusion welding, USSR study.....	20384
vacuum treatment, USSR study.....	21602
see also Creep of metals—Fracture of metals—Strategic materials—also names of metals—also names of articles manufactured from metals.	10790
<b>Metalworking machinery:</b>	
census of manufactures, industry report, change sheet.....	1807
current industrial reports.....	3391, 13756
Federal item identification guide for supply cataloging.....	12290
supplements.....	3471

# INDEX 1964

Entry	Entry
<b>Metalworking machinery—Continued</b>	<b>Meteorology—Continued</b>
USSR industrial development, translations	satellites—Continued
1134, 1235, 1259, 2472, 2484, 2599, 2705, 2846, 2851, 2854, 4951, 5038, 5090, 5133, 5137, 5159, 5268, 9164, 9174, 10770, 11113, 11166, 12776, 12903, 13001, 14520, 14545, 16134, 16148, 16360, 16433, 16485, 16506, 18258, 18268, 18417, 18585, 19840, 20007, 20231, 20341, 20393, 21506, 21591.	TIROS V television cloud photog-raphy, catalogue
<b>Metamorphic rocks, see Rocks.</b>	9882
<b>Metaphase of 1st maturation division of sturgeon oocytes, USSR</b>	19026
1240	TIROS VI television cloud photog-raphy, catalogue
<b>Metastable atoms, see Atoms.</b>	19026
<b>Metathesis of bastnaesite and solvent extraction of cerium</b>	statistical methods used in study- ing finite-difference structure of balance equation, USSR study
7457	7043
<b>Metcalf, Robert W.:</b>	summer student trainee report, 1963
mineral industry of Massachusetts	16921
mineral industry of Virginia	synoptic processes and turbulence in troposphere over Trans- caucasia, USSR study
2990	20052
<b>Metcalf, T. G.:</b>	USSR—
cold relationship upon biological properties peculiar to influenza virus, etc.	articles
4252	10822
influence of hibernation upon ex- perimental infections in Alas- kan ground squirrel	hydrodynamic long-range weather forecasting
19144	18479
<b>Metcalf, Wendell O., health mainte- nance programs for small busi- ness</b>	organizations, plans and meet- ings
13447	2746
<b>Metcalf, Z. F., cicadelloidea, bibli- ography</b>	research and development
11744	7011
<b>Meteor dust, see Cosmic dust.</b>	studies
<b>Meteorites:</b>	7022, 16375, 20301
meteoritics, general information	translations
14906	Weather Bureau special services, acceptance and use of funds from States, etc., report
microscopic properties	15744
13449	<i>see also</i> Winds.
<b>Meteoroids, see Meteors.</b>	<b>Meteorology and hydrology (Russian language periodical):</b>
<b>Meteorological apparatus and instru- ments, varactor diode paramet- ric amplifier for rawin set AN/GMD-2, evaluation</b>	translations
65	1302, 11207
<i>see also</i> Radiosonde.	<b>Meteors:</b>
<b>Meteorologists:</b>	aerodynamic heating results from analysis of flight data
employment outlook	16080
19340	artificial—
<b>Meteorologiya i gidrologiya (periodi- cal):</b>	rocket vehicle for producing, flight test performance and de- scription
translations	11401
1302	simulated reentry, preliminary analysis
<b>Meteorology:</b>	11400
computer programming, USSR	astronomy, progress, 1958-61, USSR study
study	5361
current Federal research and devel- opment activities	18945
15153	faint, velocity
instruments and methods of ob- servations, USSR study	meteoroid hazards to space ve- hicles, self-sealing structures for control
20271	21733
literature published in 1962, USSR	puncture hazard to space vehicles, tolerance limits above surface of earth
2749	7497
marine observations, manual	radar investigation at high rates of detection
9878	5522
nuclear—	<b>Meters:</b>
problems	fluid-pressure, calibrated without removal from flow line
8048	9559
selected articles	liquid level, with no moving parts, design
14909	13182
observations above 30 kilometers	<i>see also</i> names and types of meters, or substances, etc., measured.
14795	<b>Methanes:</b>
observations and instrumentation, USSR study	coat dust-methane-air mixtures, ig- nition, etc.
16396	7447
occlusions, structure as determined from serial ascents and verti- cally-directed radar	cost estimates of processes for sepa- rating mixtures of methane and hydrogen
7965	20506
Poland, organization and activities of State Institute	degasification, removing from Poca- hontas no. 4 coalbed in south- ern West Virginia
922	1443
price list	stratified methane-air mixtures, formation and flammability
1552	7432
progress, USSR studies	synthesis with self-generated car- bon-expanded iron catalyst
18442	11331
records documentation	<b>Methodism, John Wesley, the founder (remarks)</b>
9881-82, 13529-530, 15156-162, 16919- 920, 19026.	19367
<b>satellites—</b>	<b>Methodist Church, Minnesota Annual Conference, see Minnesota Annual Conference of Metho- dist Church.</b>
present state and future pros- pects	<b>Methodology:</b>
13260	natural science problems, USSR
TIROS, 1st weather satellite, gen- eral information	study
5536	12936
TIROS I meteorological satel- lite system	training, programmed instruction
5523	13678, 17049
TIROS I to IV, world atlas of photography	<i>see also</i> subjects.
20525	Methods of determining permeability, transmissibility and draw- down
	2424

# JANUARY-DECEMBER

	Entry		Entry
Methylandrostendiol, anti-athero-		Mexico-United States Interparila-	
genic action in experimental		mentary Group:	
atherosclerosis in rabbits,		3d meeting—	
USSR study—	12730	House delegation report—	10312
Metrology, <i>see</i> Gages.		Senate delegation report—	4582
Metropolitan America, selected bibli-		4th meeting—	
ography—	19599	House delegation report—	13963
Metropolitan areas, <i>see</i> Cities and		Senate delegation report—	14137
towns.		Meyer, Charles H., tomato repacking	
Mexican fruit flies, <i>see</i> Flies.		methods and equipment—	32
Mexico:		Meyers, Joseph H., address, Nov. 21,	
air transport services, agree-		1963—	1661
ments—	20841-842	Miami, Fla., occupational wage sur-	
aviation transport services, agree-		vey—	9462
ment—	7798	Mica:	
Chamizal problem, convention—		minerals yearbook chapter—	20486
appropriations, 1964, suppli-		water content—	12512
mental—	10358	Mice:	
boundary solution—	2137, 7799	blood clearance of carbon and bac-	
implement—		teria, effect of low tempera-	
hearings—	4580-81, 8378	ture exposure—	4244
law—	10143	cold exposure, effect on peripheral	
reports—	4521, 4566, 6332, 8342	blood—	19143
delivery of water to Mexico, spe-		fed irradiated food, histopathology—	110
cial studies—	15077	Klebsiella pneumonia infection, ef-	
economy, basic data—	6860	fects of space cabin environ-	
electronic products, market infor-		ments on resistance—	11807
mation—	21083	white, roentgen irradiation effect	
emergency international flood con-		on susceptibility to ornithosis	
trol works, lower Colorado		virus, upon infection with aeo-	
River, conclusion of agree-		sol of virus, USSR study—	12653
ments—		Michael, William H., Jr., considera-	
hearings—	14000	tions of motion of small body	
law—	17270	in vicinity of stable liberation	
reports—	13966, 15709	points of earth-moon system—	7557
establishing business in Mexico—	18179	Michaels, Robert E.:	
farm labor program, extend, law—	1932	standard reference materials—	
foreign trade regulations—	8831	preparation of NBS copper-base	
labor, etc—	1372	spectrochemical standards—	20638
labor law and practice—	5431	white cast iron spectrochemical	
lichen family, Graphidaceae, study—	5563	standards—	14935
migratory agricultural workers,		Michaels, V. H., U.S. export control	
agreement—	7781	regulations, summary—	10708
political subdivisions, motor fuel		Michels, Thomas E., backward recur-	
taxation compact, consent of		rence method for computing	
Congress, report—	17733	regular Bessel function—	9577
relief from double taxation on		Michelson stellar interferometers,	
earnings from operation of		infrared interference spectrom-	
ships and aircraft, agree-		eter, evaluation, test and cal-	
ment—	20834	ibration—	14774
statue of Abraham Lincoln, pres-		Michigan:	
entation by U.S.—		annual survey of manufactures,	
law—	17258	1962, standard metropolitan	
reports—	6473, 13964	statistical areas, and large in-	
trade, beef and veal, agreement—	15120	dustrial counties, statistics—	6027
weather stations, cooperative me-		climatic summary, 1951-60, decen-	
teorological program, contin-		nal census—	21919
uation, agreement—	11629	climatological data—	3329
winter vegetable production, sur-		district courts, eastern district,	
vey—	14288	transfer Genesee and Shia-	
Mexico, Gulf of:		wassee Counties to southern	
climate of Texas and adjacent		division—	
Gulf waters—	15151	law—	21119
coast pilot, supplement—	6108	reports—	15553, 17857
eastern basins, Ogeechee River to		electric rate book—	19694
Pearl River, surface water rec-		forest owners and timber manage-	
ords, Oct. 1950-Sept. 1960—	10659	ment—	12477
engineer report—		Great Lakes area, fishery prod-	
departmental edition—	10488	ucts, wholesale dealers, list—	728
document edition—	10159	labor organizations, reporting, reg-	
oceanographic data, inventory—	6704	ister—	16572
oyster industry—	10558	landings, fishery products—	3720
utilization of U.S. otter-trawl		legal status of women—	5763
shrimp vessels, 1959-61—	14271	mineral industry, minerals year-	
western basins—		book chapter—	1415
relations between flood peaks and		municipal waste facilities—	3105
hydrologic factors—	12515	municipal water facilities—	18910
surface water records, Oct. 1950-		precipitation data, hourly—	3578
Sept. 1960—	12523	public school finance program,	
		1962-63—	2282
		weather stations, decadal census—	15158
		western, industrial modernization,	
		opportunities (address)—	19276
		women workers, 1960—	13553

Do not order from index; see indicated entry

Page 425



# INDEX 1964

	Entry		Entry
Michigan City, Ind., railway and motor carrier accident.....	4878	Micrometeoroids:	
Michigan National Bank, branch offices, establish and operate in Saginaw and Grand Rapids, Mich., hearing.....	19593	penetration experiments as single-sampling life-test sampling plans.....	9565
Mickelsen, William R., electrostatic thrusters for space propulsion.....	11381	penetrations, improved sensor device for counting.....	13189
Microacoustic system analysis by measurement of free-field sound speed.....	18866	satellites—	
Microbiologic studies of 2-man space cabin simulator.....	11806	Explorer XIII, stainless-steel penetration rate experiment.....	1458
Microbiologists:		Explorer XVI—	
all-Union congress, USSR.....	19961	NASA facts.....	20535
examination announcement, amendment.....	21055	stainless-steel penetration rate experiment.....	18772
public health scientist, examination announcement.....	209	transducer—	
Microbiologists, Hungarian Society of, <i>see</i> Hungarian Society of Microbiologists.		advances micro-measurement range.....	13203
Microbiology:		use for measuring heartbeat of bird embryos.....	11364
dewaxing process yielding protein-vitamin concentrates.....	18798	Microminiature amplifier with thin-film passive parts.....	13371
Hungarian Microbiological Society, Bacteriology and Virology Section, scientific meeting, invitation.....	16243	Microminiaturization, <i>see</i> Miniaturization.	
Inframicrobiology, Rumanian success.....	6970	Micro-organisms:	
Interchange of oral and intestinal bacteria between individuals in 2-man space cabin simulator, studies.....	11806	affect yellow-poplar growth.....	8671
progress in microbiological research in Rumania.....	10985	effects on human body, USSR study.....	18547
radiation, sanitary protection of reservoirs, USSR study.....	21631	found in human gingival tissue.....	1748
reservoir investigation, USSR study.....	5116	mesophilic activated sludge cellulose, effects of miscellaneous wastes.....	15240
role in increasing corrosiveness of mine water of Kizel coal basin, USSR.....	2580	pathogenic, USSR studies.....	2527
Rumania, Dr. I. Cantacuzino Institute, activities.....	16016	physiology and biochemistry problems, USSR scientific council's studies and plans.....	16204
Ukrainian Institute, status and prospects for development of research.....	10764	reactions to certain media, USSR studies.....	2634
USSR—		virulence and pathogenicity, chemical bases, USSR study.....	21633
current research.....	12697	what they are, where they grow, what they do.....	9955
dissertation.....	20141	<i>see also</i> names of micro-organisms.	
plant physiology book review.....	5408	Microphones:	
studies.....	14638	glottal source measurements, logical techniques.....	19159
Microcalorimeters, universities, duty-free entry.....	14089, 17230, 17580	low frequency, use of foamed polystyrene wind-noise shield.....	13199
Microelectronics, <i>see</i> Electronics.		Microphotography, specifications for Library of Congress microfilming.....	16618
Microfilming, <i>see</i> Microphotography.		Micropulsations, magnetotelluric, at widely separated stations, analysis.....	7962
Microfilms:		Microscopes, attachment converts microscope to point source autocollimator.....	14829
inspection for aging blemishes.....	7575	<i>see also</i> Electron microscopes.	
Presidential papers in L. C., remove microfilming authorization limitation—		Microscopy:	
law.....	10142	television, in cytopathology.....	3114
reports.....	2036, 10394	ultraviolet and luminescent, detection of location of nucleoproteins in oocytes of frogs, USSR study.....	5007
Microflora, <i>see</i> Bacteria and bacteriology.		<i>see also</i> Electron microscopy.	
Microlepidoptera:		Microsociology, and psychiatry, USSR study.....	7223
moths of family Acrolophidae.....	20655	Microsomes, oxidase and reductase activity in liver of young male rats, influence of X-irradiation on development.....	13651
neotropical—		Microstructure of ceramic materials, proceedings of symposium, Apr. 27-28, 1963.....	11431
genera Orsothricha Meyrick and Pallinorsa Meyrick.....	21803	Microwave filters, modified filter prevents conduction of signals along high-voltage power supply leads.....	13162
genus Proeuella from Central Chile, synopsis.....	21802	Microwaves:	
new genus of Stenomitidae.....	18822	automatic plotting of spin-wave instability threshold data.....	19158
restriction of Gonionota melobaphes Walsingham with descriptions of new species.....	9650	biological effect, mechanism problems, USSR study.....	4894
Micromachining produces optical apertures to micron dimensions.....	20565	circuit applications.....	20690
Micromechanisms of cleavage fracture in polycrystalline iron.....	13437	dosimetric methods in therapy, USSR study.....	6943

Entry	Entry
Microwaves—Continued	Migrant labor—Continued
double-throw device switches 2	problem in U.S., report..... 6484
lines quickly..... 7485	State migratory labor committee, directory..... 2948
interferometer measurements of electron-ion recombination in nitrogen, air, and argon, K <sub>a</sub> -band mixer, experimental..... 5594	Migration:
low intensity, temperature reaction of skin during irradiation, USSR study..... 7063	and radioactivity of certain marine animals, USSR studies..... 7061
millimeter wave technology, state-of-the-art review..... 7661	college students, fall 1963 survey, highlights..... 10465
parametric amplification..... 5620	farm people, annotated bibliography 1946-60..... 38
range, electric parameters of biological tissues, USSR study..... 18494	geographic mobility, cost..... 13663
results of microwave treatment of some diseases, USSR study..... 18341	international, population problems study..... 2115
sky temperatures apparent at millimeter-wave frequencies..... 19171	strontium through quartz sand..... 5991
therapy, treatment of patients, USSR study..... 14576	Migration of workers, see Migrant labor.
MID-CEC series..... 11742	Migratory birds, see Game and game birds.
Midden, Raymond E., diffuser performance of Mach 8 open-jet tunnel and model-blockage effects at stagnation temperatures to 3,600° F..... 16700	Migratory workers, see Migrant labor.
Middle Atlantic States, see Atlantic States.	Mihal, John, see Kish, John.
Middle East, see East (Middle East).	Mikhail Lomonosov (ship):
Middleton, Helen K., hydraulic research in United States, 1964..... 16738	Atlantic Ocean, 14th voyage..... 16514
Midges, see Flies.	Mikulas, Martin M., jr., behavior of flat stretched membrane wrinkled by rotation of attached hub..... 18781
Midstate project, construct, operate, and maintain, hearings..... 12272	Mileu, Stefan, research activities, Rumania..... 6997
see also Missouri River Basin project.	Milder, Nelson L., filament deterioration in electron-bombardment ion sources..... 11382
Midvale area, Idaho, ground water..... 8783	Mildew:
Midwest (U.S.):	how to prevent and remove, home methods..... 11762
cooperative bulk fertilizer blending plants in upper Midwest..... 15879	tobacco, oospores research, Bulgarian studies..... 1000
fresh fruit and vegetable unloads in midwestern cities by commodities, States, etc..... 7881	Miles, Daniel W., relief..... 21178
labor organizations, reporting, register..... 16578	Militarism, socialist construction, and advantages, Communist China studies..... 5114
water development..... 21243	Military Academy, West Point:
Midwest Emery Freight System, Inc., accident..... 14405	cadets, increase authorized strength..... 4571
Midwest Regional Water Pollution Control Laboratory, Institutional Cooperation Committee, report..... 9724	hearing..... 6187
Midwestern States, see Midwest (U.S.).	law..... 4567
Mieszkue, Bernard J., space cabin environments effect on mice resistance to Klebsiella pneumoniae..... 11807	report..... 16621
Miettinen, J. K., cesium-137 and potassium in Finnish Lapps and their diet..... 13392	catalogue, 1964-65..... 15518
Miffin quadrangle, Wis., geology..... 18102	Iran citizen, instruction, report..... 9491
Mighell, Ronald L., contract production of truck crops..... 12311	official register, 1963..... 15519
Migrant labor:	Thailand citizens, instruction, report..... 21683
agricultural, community efforts to improve conditions..... 18613	this is West Point, pictorial introduction to academy..... 15520
agricultural migrants and public health..... 5645	Vietnam Republic citizens, instruction, report..... 15520
children, health needs, Kansas day care program..... 9717	Military aid:
contractor registration—	action to obtain reimbursement from foreign countries for administrative expenses under program, Defense Dept., GAO report..... 8721
appropriation, 1965, proposal, report..... 19527	agreement with—
law..... 19390	Argentina..... 15127
cooperative extension service work..... 2315	Belgium..... 11635
coverage of agricultural workers under State and Federal labor laws..... 13032	China..... 18970
investigation, expenses, reports..... 4539, 6471	Dominican Republic..... 15125
Mexican agricultural workers, agreement..... 7781	Japan..... 18974
	Norway..... 1620, 21886
	appropriations, 1965, budget amendment..... 8257
	cooperation with NATO for mutual defense, agreement—
	hearings..... 17440
	reports..... 19457, 19569
	defense, military assistance, understanding, Brazil..... 9836
	deficiencies related to inadequate administration of military budget support funds provided to certain foreign countries, GAO report..... 19761

# INDEX 1964

Entry	Entry
<b>Military aid—Continued</b>	<b>Military art and science—Continued</b>
foreign assistance act of 1963—	logistics, ROTC manual..... 10011
analysis..... 2111	military application of cybernetics,
law..... 1934	USSR study..... 7100
report..... 384	military strategy, 1962 and 1963
foreign assistance act of 1964—	editions, comparison, USSR..... 2819
analysis..... 12130	operations, ROTC manual..... 17050
hearings --- 8379, 10310, 12128, 14136	pathfinder operations, Army field
law..... 21125	manual..... 97
reports..... 12068,	shore party and helicopter support
12075, 15676, 19489, 21197	team operations, Fleet Marine
foreign assistance appropriations,	Force manual..... 5459
1964—	small unit tactics, including com-
hearings..... 2209	munications, ROTC manual..... 19214
law..... 1903	soil stabilization for military pur-
reports..... 2069,	poses, Waterways Experiment
2098-99, 2103, 2220, 12045	Station capabilities..... 638
foreign assistance appropriations,	Soviet doctrine, USSR study..... 932
1965—	synthetic poisons, chemistry, effects
law..... 21126	and military significance, East
reports..... 13950, 13952, 19582	German study..... 8953
foreign operations appropriations,	USSR military doctrine—
1965, hearings..... 12117	list of references..... 9780
mutual defense and assistance pro-	translations..... 12624
grams, appropriations, amend-	USSR translations..... 1158,
ment..... 10193	2529, 7153, 7219, 7298, 9069,
mutual defense and development	9251, 9345, 9371, 10944, 10996,
programs, proposed, 1965,	11011, 11199, 12585, 12624,
summary presentation..... 8834	14478, 14486, 16519, 18245,
mutual defense program, 1964,	18267, 18295, 18392, 18505,
background material..... 4495	18523, 20009, 20027, 20188,
mutual defense program, 1965,	20250, 21517, 21579, 21598,
background material..... 8377	21601.
personnel to administer program,	<i>see also</i> Airborne operations.
inefficient utilization in ad-	Military assistance, <i>see</i> Military aid.
vanced western European	Military ceremonies, honors, and sa-
countries, Defense Dept., GAO	lutes, Army field manual..... 17037
report..... 8724	Military civic action, troop topics..... 11844
unnecessary procurement, etc., Side-	Military clothing, <i>see</i> Uniforms.
winder missile training sys-	Military communications, defense
tems under military assistance	communications system engi-
program, GAO report..... 8740	neering, installation standards
Vietnam—	manual..... 6536
additional amount, message from	Military construction, <i>see</i> Installa-
the President..... 10195	tions (military).
amended request, message from	Military depots, Navy Department,
the President..... 12563	Western Pacific supply depots,
Military Air Transport Service, MATS	unnecessary retention of spare
flyer (periodical)..... 3713	parts, GAO report..... 10624
Military airfields, <i>see</i> Airports.	Military drill, field manual..... 17037
Military Appeals Court, <i>see</i> Court of	Military education:
Military Appeals.	annual active duty training for
Military art and science:	Army and Air Reserve officers,
bionics and military technology,	payments for days on which no
USSR study..... 18321	training or travel was per-
combined exercises, 1964, agreement	formed, GAO report..... 10612
with China..... 16875	Army field training, administrative
Communist China, politico-military	instructions --- 7585, 11442, 13279
relationships..... 9803	guided missiles training and op-
cybernetics origin, USSR study..... 18360	eration..... 4236
defense traffic management hand-	USSR armed forces training and
book..... 6540	indoctrination..... 12754
desert operations, Army field man-	Military equipment, <i>see</i> Military sup-
ual..... 8026	plies.
DOSAAF Plenum..... 18245	Military facilities:
environmental effects on military	Army National Guard program,
operations, Waterways Experi-	operating procedures..... 9642
ment Station capabilities for	joint declaration concerning re-
evaluating..... 628	newal of defense agreement
field artillery support, Fleet Marine	with, Spain..... 1608
Force manual..... 18653	Military government, soldiers become
field command procedures, mainte-	governors, World War II,
nance management..... 13683	special studies..... 9493
field maneuver sense, Army pamph-	Military handbooks..... 561,
let..... 103	4604, 10447, 12303, 14162-163,
French military nuclear develop-	19615-617.
ments, press reports..... 14581	Military history:
French nuclear strategy..... 19897	Army historical program, 1965.... 9492
helicopterborne operations, Marine	Harmon memorial lectures (series)..... 9966
Corps manual..... 1393	Military History, Office of Chief of,
logistical command, Army field	Army, publications, list..... 5470
manual..... 17038	
logistical support for UN operations	
in Korea, agreement with Aus-	
tralia, etc..... 11627	

# JANUARY-DECEMBER

	Entry		Entry
Military hospitals:		Military service—Continued	
Army, staffing guide, Army Department pamphlet	5944	unqualified young men, report	7678
construction, hearings	17640	why we serve, troop topics	10008
construction and utilization policies, report	19498	see also Armed Forces.	
construction standards and criteria, engineering and design manual, change	6594	Military standards	562-563, 3724, 4606-7, 6547, 8466, 10448-450, 12304, 14164, 21255.
Military housing, see Housing.		Military supplies:	
Military index:		Air Force procurement instruction, revisions	3234
Defense Department, specifications and standards	19614	airdrop of supplies and equipment, rigging—	
supplement	3586	components of Army air/ground pickup systems	19219
Military information, Eastern Europe, translations	1257, 5026, 5039, 6957, 7287, 10852, 10886, 11190, 11283, 12933, 14508, 16128, 16544, 18216, 18484, 18560, 20165, 21521	Erdlator 600 gph trailer-mounted water purification unit	19220
Military installations, see Installations (military).		Armed Forces procurement regulations, revision	3264
Military intelligence:		Army Air Force, buying aircraft, materiel procurement, World War II, special studies	20462
Ar Force pamphlet	7978	Army National Guard, maintenance of supplies and equipment	11443
PACAF basic bibliographies, supplement	5892	Army procurement procedure, change	4280
Military justice, see Military law.		cataloging system, standardization, etc., semiannual report	10298
Military law:		commodity list, Army Mobility Equipment Center	11884
and boards of officers, ROTC manual	1764	computer equipment, use for technical supply, USSR study	12674
military justice, trial procedure—review, Army Dept., pamphlet	19208, 3722	Defense Department—	
Military missions, agreement with Liberia	15126	specifications and standards, index	19614
Military occupational specialties, enlisted evaluation system		supplement	3586
MOS evaluation test aid, construction machine operator	20991	standardization documents, supply classification listing, 8496	19613
Military operations, see Military art and science.		defense procurement circular	6539
Military Packaging Training Center, see Joint Military Packaging Training Center.		defense supply procurement regulation revision	3411
Military pay, see Pay, allowances, etc.		disposal manual	4600
Military personnel, see Armed Forces—Army Department—Navy Department.		disposition of equipment and materials, agreement with China	18970
Military ports, construction and rehabilitation, technical manual	19216	electronic test equipment, military standardization handbook	19617
Military posts, repairs and utilities, work performance standards for post engineering, Army pamphlet	10009	excessive stocks at selected Air Force bases in Japan and Korea, GAO report	6766
Military posture, hearings	6344	Federal supply catalog, manual	10444
Military publications, index of AMC publications	17034, 20088	field army, air delivery of supplies and equipment, Army field manual	20990
Military records, improved Army equipment record procedures	21002	impact of military supply and service activities on economy, hearings	13916
Military research:		improved Army equipment record procedures	21002
Air Force contracts, negotiation and awards, case study—		lend to Girl Scouts of America for 1965 encampment—	
hearings	6343	law	17291
report	8366	reports	13945, 15728
Army research and development, newsmagazine	3266	maintenance management, field command procedures	13683
Military review (periodical)	3723	management report instructions, Federal property, NGB pamphlet	14944
Military roads, see Roads and highways.		material inspection and receiving report, DD form 250 series	18868
Military Sea Transportation Service, sealift magazine	4013	metals, identification, guidelines, pamphlet	20951
Military security, relationship with national strategy and arms control in thermonuclear world	4276	MILSTRIP, military standard requisitioning and issue procedures, manual	10451, 12300, 19618, 21256
Military service:		Navy contract clause book for firm fixed-price supply contracts	13489
obligation, Coast Guard OCS	6111	optical design, standardization handbook	561
universal military training and service act—		packaging, preservation and intermediate protection, course outlines	6545
exemption of surviving son—		packing and carloading, course outline	6546
hearing	6496		
law	13908		
reports	2210, 14069		
veterans' reemployment rights	15145		



# INDEX 1964

	Entry		Entry
Military supplies—Continued		Milk—Continued	
preservation, packaging, etc., DSA		production—	
manual	12298	monthly reports	1624, 3163, 3726, 5712, 9842, 11649, 13485, 16882
procurement—		statistical summary, 1963	7805
and supply, economic aspects,		radionuclide analyses, environ-	
1964	8237	mental surveillance labora-	
equipment for Marine Corps		tory	21847
tactical airfields—		sanitation honor roll—	
hearing	8363	1961-63	1561
report	21187	1962-63	11564
role of small business, 1964, hear-		special programs, Armed Forces	
ings	21244	and veterans hospitals, ex-	
procurement legal service, Army		tend—	
pamphlets	108,	hearing	12115
4287, 5947-48, 10010, 11846,		law	17388
13679, 15271, 19213.		reports	10244, 17772
purchased from agencies for the		strontium 90 content, health	
blind, inspection and accept-		hazard	18901
ance, DSA regulation	12299	Veterans' Administration procure-	
research and development ammuni-		ment for hospitals, etc., action	
tion series	17035	to avoid excessive costs, GAO	
research and development of ma-		report	4765
teriel, engineering design hand-		Milk tanks, see Tanks.	
book	94-95	Milking shorthorn cattle, see Cattle.	
small business procurement prac-		Milkweed, livestock poisoning in	
tices and programs, hearings	12155	Western States, reducing	
standardization, policies, proce-		losses	20915
dures, etc., manual	2252,	Milky way :	
4049, 15827, 21250-251		radio star scintillation over Canada	
Military terms, United States, dic-		during July 20, 1963 eclipse	19153
tionary for joint usage	6875	transmission of information by ex-	
Military tractors, see Tractors.		traterrestrial civilizations,	
Milk :		USSR study	14648
and milk product equipment, guide		Millar, Wilton T., examining and	
for evaluating sanitary con-		testing clay from Hartford	
struction	20764	County, Conn. for lightweight	
appraisal of Federal orders (ad-		aggregate use	18668
dress)	7913	Miller, David, thermal operating	
bulk cooling tanks on farms supply-		performance of nuclear reac-	
ing Federal milk order mar-		tors	8076
kets	13559	Miller, G. Kimball, jr., abort scheme	
containers, amend D.C. act regard-		for lunar landings	14871
ing size—		Miller, Herman P. :	
law	17264	education, advantage for lifetime	11287
report	14106	how our income is divided	187
distributors' sales and costs	3725	Miller, John F. two- to ten-day	
economics of milk marketing in		precipitation for return periods	
Alaska	19087	of 2 to 100 years in contiguous	
evaporated, condensed, and dry	3447	United States	19027
farm production, disposition and		Miller, John L., jr., synthesis and	
income, 1962-63	11650	properties of germanium fluor-	
Federal orders—		phlogopite	13119
allotments under, reduce excess		Miller, Richard D., analyses of nat-	
marketings, etc., hearings	19495	ural gases of United States	11316, 20481
market statistics—		Miller, Robert E. :	
annual summary, 1963	11780	development and standardization	
monthly	3479	of Air Force officer qualifying	
marketing—		test-64	11803
questions and answers	1673	predicting 1st year achievement of	
summaries	5795, 7888	Air Force Academy cadets,	
fission products, concentrations		class of 1964	19163
effected by farming practices	16833	Miller, Robert R., testimony, hear-	
fluid—		ings	6526
milk and cream report	3513	Miller, Stanley F., labor and ma-	
packaged, sales in Federal milk		terial requirements for public	
order markets, by size and type		housing construction	13072
of containers, etc.	15183	Miller, William C. :	
fresh whole, consumption in United		boron	18659
States, 1962, national food		bromine	14731
consumption survey	3111	Miller Transporters, Ltd., accident	8840
iodine-131—		Millimeter waves, see Microwaves.	
content, effect of evaporation		Mills, see Flour mills—Paper mills—	
and powdering processes	20747	Pulp mills—Steel mills.	
surveillance measurements, analy-		Millville, N.J., consumer expenditures	
tical quality control service		and income, 1961	11269
of Radiological Health Divi-		Millwork :	
sion, interlaboratory study	20743	Federal item identification guides	
ion exchanged milk, USSR study	9001	for supply cataloging	12292
ionite, use in acute disturbances of		supplement	3473
gastrointestinal tract of in-		water-repellant preservative non-	
fants	5027	pressure treatment, standard	
market, long distance shipment	7931	of trade	18802
markets, producer delivery patterns		Millwrights, employment outlook	9435
in New England	16958		
mastitis screening procedures	5657		

	Entry		Entry
Millsop, W. D., what can cooperatives offer farmers for future?-----	2303	Mineral lands—Continued	
MILSTRIP, military standard requisitioning and issue procedures manual— 10451, 12300, 19618,-----	21256	California, convey rights—	
Milwaukee, Wis.:		law -----	1945
occupational wage survey-----	14698	report -----	2190
principal electric facilities, map-----	674	conveyance of mineral rights to Fairbanks, Alaska—	
wholesale fruit and vegetable market facilities-----	15214	law -----	17268
Minas Gerais, Brazil:		reports -----	8300, 15735
geology and mineral resources (series)-----	10638	leasing act of 1920, amend-----	
geology and ore deposits of Belo Horizonte, Ibirite and Macacos quadrangles-----	10638	law -----	17385
lead-zinc deposits in Municipio de Januaria-----	6796	reports -----	15560, 17784
Mind, see Intellect.		Osage Indians mineral reservation, extend for indefinite period—	
Mind your world, citizen's guide to international understanding-----	18960	law -----	21124
Mine accidents:		reports -----	17571, 17841
coal mine injuries—		sale of mineral estate in land patented under color of title act, report -----	17594
monthly report-----	3332	Vega Dam and Reservoir, reconvey mineral rights to former owners, report-----	15550
1961-----	2983	Mineral Point quadrangle, Wis., geology -----	797
Federal coal mine safety act amendments, report-----	4457	Mineralization associated with magnetic anomaly in part of Ely quadrangle, Nev-----	18122
nonmetal industries, injury experience, 1960-----	1402	Mineralogy, see Minerals.	
Mine drainage:		Minerals:	
geochemistry of ground water-----	2423	and primary products, Federal item identification guides for supply cataloging -----	12295
northern anthracite field, Pa., mine waters, investigation-----	6810	supplements -----	3476
sealing off abandoned coal mines to prevent pollution of waterways, hearings-----	8395	Arizona industry, minerals yearbook chapter-----	1406
Mine explosions:		Arkansas industry, minerals yearbook chapter-----	1407
coal-dust and gas, experimental, ignition of coal dust-methane-air mixtures by hot-turbulent-gas jets-----	7447	by-products from sea-----	10675
natural gas concentration effect on ignitibility of gallery atmospheres-----	5487	California industry, minerals yearbook chapter-----	2984
see also Coal dust—Methanes.		census publications, price list-----	13389
Mine filling, see Hydraulic mine filling.		Colorado industry, minerals yearbook chapter-----	1408
Mine gases, gallery atmospheres, effect of natural gas concentration on ignitibility-----	5487	commodity data summaries-----	13112
Mine, Mill & Smelter Workers, International Union of, see International Union of Mine, Mill & Smelter Workers.		Connecticut industry, minerals yearbook chapter-----	20487
Mine props, steel, used in longwall mining, Pennsylvania anthracite mine-----	7455	Delaware industry, minerals yearbook chapter-----	20488
Mine-roof bolts, see Bolts and nuts.		deposits—	
Mine roofs, rock and bolt behavior resulting from nearby blasts-----	9501	Jefferson City quadrangle, Mont.-----	4793
Mine safety, see Safety of life.		Mount Morrison quadrangle, Calif-----	6804
Mine ventilation:		Osgood Mountain quadrangle, Nev-----	8768
dust-control methods for continuous mining of coal, study-----	2982	simulating, using Monte Carlo techniques and mathematical models-----	16643
removing methane (degasification) from Pocahontas no. 4 coalbed in southern West Virginia-----	1443	Thomas and Dugway Ranges, Utah-----	14341
Mine water, see Mine drainage.		electrical conductivity change with age, USSR study-----	12917
Miner, Richard J.:		extraction, depletion allowance, apportionment between parties, to certain contracts for income tax deductions, report-----	13948
ionospheric behavior during solar eclipse of July 20, 1963, Bedford, Mass-----	7964	fertilizers—	
solar flux measurements during eclipse of July 20, 1963-----	4231	and crop yields, USSR study-----	10917
Mineral engineering, adaptation of new research techniques, progress report-----	8060	improving use, USSR study-----	10724
Mineral industries, see Minerals.		organizing transportation in USSR-----	10825
Mineral lands:		Florida industry, minerals yearbook chapter-----	1400
Alaska, subject to lease, etc., selection, amend statehood law—		Georgia industry, minerals yearbook chapter-----	21697
law -----	8228	Hawaiian industry, minerals yearbook chapter-----	21698
reports-----	487, 6328	heavy, in saprolite of crystalline rocks, Shelby quadrangle, N.C.-----	2418
		high-conductivity, electrostatic separation -----	9521
		Idaho industry, minerals yearbook chapter-----	21699
		Illinois industry, minerals yearbook chapter-----	1410

# INDEX 1964

Minerals—Continued	Entry	Minerals—Continued	Entry
Indiana industry, minerals year-		Osage Indians mineral reservation,	
book chapter.....	1411	extend for indefinite period—	21124
industries—		law.....	17571, 17841
area reports, annual.....	3263	reports.....	2988
census, 1958, link of establish-		Pennsylvania industry, minerals	
ment data and IRS corpora-		yearbook chapter.....	18127
tion data.....	19306	Pierre shale, mineralogical composi-	
census, 1963—		tion, quantitative interpreta-	
hearings.....	8891	tion from X-ray and chemical	
manual of industry and prod-		data.....	20491
uct classification.....	6036	Puerto Rico, Panama Canal Zone,	
materials consumption items.....	8137	Virgin Islands, and posses-	
reference manuals, announce-		sions, industry, minerals year-	
ment and order form.....	13746	book chapter.....	2414
civil defense.....	16622	resources—	
employment and injuries, min-		Alaska (series).....	18101
erals yearbook chapter.....	21688	code of Federal regulations.....	8574
enterprise statistics, 1958.....	184	Minas Gerais, Brazil (series).....	10638
announcement and order form.....	153	Nevada.....	17668
review, 1962, minerals yearbook		print as Senate document, re-	
chapter.....	1445, 2997	port.....	15690
statistical applications of proba-		upper Missouri River basin, Fort	
bility theory.....	9498	Peck Reservoir to Monroney	
technologic trends, minerals		Dam.....	18669
yearbook chapter.....	1446	Utah.....	8451
Kansas industry, minerals year-		Wyoming, western Perelman	
book chapter.....	1412	rocks.....	2420
Kentucky industry, minerals year-		Rhode Island industry, minerals	
book chapter.....	1413	yearbook chapter.....	21705
leasing act of 1920, amend—		separation, magnetization delay.....	9527
hearings.....	4586, 14145	sources of mineral constituents in	
law.....	17406	water from granitic rocks,	
reports.....	17558, 17777, 17826,	Sierra Nevada, Calif. and	
Louisiana industry, minerals year-		Nev.....	12513
book chapter.....	2985	South Carolina industry, minerals	
magnetic susceptibility, linear cor-		yearbook chapter.....	21706
relation with chemical composi-		South Dakota industry, minerals	
sition.....	7456	yearbook chapter.....	1423
Maine industry, minerals yearbook		southern Black Hills pegmatites.....	4783
chapter.....	20489	southern Great Plains soils.....	1680
Maryland industry, minerals year-		Tennessee industry, minerals year-	
book chapter.....	1414, 21700	book chapter.....	1424
Massachusetts industry, minerals		Texas industry, minerals yearbook	
yearbook chapter.....	21701	chapter.....	2989
Michigan industry, minerals year-		trace mineral losses in sweat.....	19224
book chapter.....	1415	upper mantle analogues, shear de-	
mineral trade notes.....	3727	formation.....	19151
Minnesota industry, minerals year-		USSR, All-Union Mineralogical So-	
book chapter.....	1416	ciety, 1962 activities.....	4949
minor, minerals yearbook chapter.....	18673	Utah industry, minerals yearbook	
Missouri industry, minerals year-		chapter.....	1425
book chapter.....	1417	Vermont industry, minerals year-	
Montana industry, minerals year-		book chapter.....	20492
book chapter.....	1418	Virginia industry, minerals year-	
Montana resources.....	2240	book chapter.....	2990
Nebraska industry, minerals year-		Washington industry, minerals	
book chapter.....	1419	yearbook chapter.....	1426
Nevada industry, minerals yearbook		West Virginia industry, minerals	
chapter.....	11317	yearbook chapter.....	2991
New Hampshire industry, minerals		Wyoming industry, minerals year-	
yearbook chapter.....	20490	book chapter.....	1427
New Jersey industry, minerals year-		yearbook, 1962—	
book chapter.....	1420, 21702	area reports—	
New York industry, minerals year-		departmental edition.....	1430
book chapter.....	1421	document edition.....	288
nonclastic minerals in Seales Lake		fuels—	
evaporite deposit, Calif., char-		departmental edition.....	1429
acter, etc.....	19777	document edition.....	287
nonopaque heavy, in sandstone of		metals and minerals except	
Jurassic and Cretaceous age,		fuels—	
Black Hills, Wyo. and S. Dak.		departmental edition.....	1428
North Carolina industry, minerals		document edition.....	286
yearbook chapter.....	21703	see also Assaying—Strategic mate-	
North Dakota industry, minerals		rials—Terrestrial substances—	
yearbook chapter.....	1422	also names of minerals.	
Ohio industry, minerals yearbook		Minerals Exploration Office:	
chapter.....	2986	press releases.....	3903
Oklahoma industry, minerals year-		semi-annual reports.....	9494, 20463
book chapter.....	2987	Mines and mining:	
Oregon industry, minerals year-		abstracts pertaining to Communist	
book chapter.....	21704	China in Soviet journals, min-	
		ing.....	1081, 2692

# JANUARY-DECEMBER

	Entry		Entry
Mines and mining—Continued		Minimum property standards for	
Communist China, translations....	910.	multifamily housing.....	4698
1102, 1213, 1339, 2603, 2611,		Minimum wage, <i>see</i> Wages.	
2723, 2787, 2929, 4933, 4958,		Mining, <i>see</i> Mines and mining.	
4988, 5077, 5235, 5265, 6918,		Mining machinery:	
6933, 7031, 7104, 7154, 7281,		and equipment—	
8936, 8970, 10796, 12642, 12830,		current industrial reports, 1963..	11898
14412, 14537, 14643.		Federal item identification guides	
contracting mining communities		for supply cataloging.....	12289
and area redevelopment pro-		supplements.....	3470
gram, U.S. experience (pa-		permissible mine equipment, 1953-	
per).....	8015	62.....	9496
equipment, permissible, 1953-62..	9496	Ministers of religion, <i>see</i> Clergy.	
fundamentals of mining science,		Minneapolis, Minn.:	
USSR study.....	18582	Cuban refugee problem, hearings...	6516
hydrology, mining (series).....	2423,	occupational wage survey.....	11280
	6810	principle electric facilities, map...	675
in situ disintegration of hard mate-		wholesale fruit and vegetable mar-	
rial.....	15019	kets, organization.....	5838
in situ rock stresses, Ruth mining		Minnehaha County, N. Dak., soil sur-	
district, Nev. with emphasis		vey report.....	18953
on slope design problems in		Minnesota:	
open-pit mines.....	20512	annual survey of manufactures,	
injury experience, nonmetal indus-		1962, standard metropolitan	
tries except stone and coal....	1402	statistical areas, and large in-	
methods and costs—		dustrial counties, statistics....	6028
Mouat mine, American Chrome		climate summary 1951-60, decen-	
Co.....	5475	nial census.....	20878
Standard Lime and Cement Co....	13107	climatological data.....	3329
oil shale, Rifle, Colo., 1944-56..	21684	commercial forest land, ownership,	
ore grade estimating for bedded		1962.....	12462
deposits, using unequal sample		electric rate book.....	17981
interval lengths, etc.....	9523	Great Lakes area, fishery products,	
production schedules, determining		wholesale dealers, lists.....	724, 8609
by linear programming.....	13117	labor organizations, reporting, reg-	
review of mining technology, min-		ister.....	16572
erals yearbook chapter.....	13136	lightweight aggregates, expansion	
rigid foam for mines.....	7445	properties of clays, shales and	
<i>see also</i> Blasting—Coal mines and		argillites.....	1434
mining—Hydraulic mine fill-		mineral industry, minerals yearbook	
ing—Mine accidents—Mine		chapter.....	1416
drainage—Mine props— <i>also</i>		Mississippi River and tributaries,	
names of metals and minerals		fishery products, wholesale	
mined.		dealers, list.....	4738
Mines Bureau:		municipal waste facilities.....	3106
Albany Metallurgy Research Cen-		municipal water facilities.....	18911
ter, metallurgical progress re-		northeastern, spruce budworm de-	
ports.....	1782, 8088, 13719, 17064	foliation decreases in 1963.....	12457
area report, annual.....	3263	northern—	
bulletins.....	1398,	aerial survey of spruce and fir	
9495, 13103-104, 18660, 21684.		volume killed by spruce bud-	
chromium supplied for research,		worm.....	12472
July 1953-July 1961, includ-		soil moisture trends in thinned	
ing names of recipients and		red pine stands.....	776
nature of studies.....	7429	precipitation data, hourly.....	3578
coal research and technologic work		public school finance program,	
geologists, examination announce-		1962-63.....	2283
ment.....	19339	southeastern, magnetic anomaly of	
information circulars.....	1402-5,	possible economic significance..	8762
2981-83, 5472-77, 7427-29, 9496,		timber volume.....	12461
11314-316, 13105-110, 14736-		weather stations, decadal census..	15159
738, 16624-627, 18668-670,		women, legal status.....	19031
20475-481, 21690-692.		Minnesota Annual Conference of	
publications—		Methodist Church, land on	
and articles, Jan. 1-Dec. 31,		White Earth Reservation, don-	
1963, list.....	20483	ate to.....	15427, 15658, 17206
monthly list.....	3786	Minorities:	
petroleum and natural gas, 1910-		China, nationalities.....	20392
62.....	21692	ethnic, of southern China, list of	
releases.....	3904	references.....	9779
report of investigations.....	1433-44,	Kazakhs and others in Sinkiang,	
2092-96, 5480-96, 7430-61,		suppression by Communist Chi-	
9498-9528, 11318-344, 13113-		nese.....	989
135, 14744-764, 16632-646,		police-minority group relations in	
18680-706, 20498-512, 21709-		Los Angeles and San Francisco	
718.		Bay area.....	1839
safety competition awards, Nation-		Minors, <i>see</i> Child labor—Children—	
al Crushed Stone Association,		Youth.	
1962.....	1397	Mint Bureau:	
Mingus Mountain, burn, vegetation		domestic coins manufactured by	
changes following fire.....	12471	mints of U.S., 1963.....	21723
Miniaturization, microminialized		report, 1963.....	9529
instrumentation system eval-			
uation, Hughes.....	1728		



# INDEX 1964

	Entry		Entry
Mints:		Missiles—Continued	
retain 1964 on all coins—		jet effects at supersonic speeds on	
hearing -----	15803	base and after-body pressures	
law -----	17438	of model having single and	
reports -----	15535, 15697, 17550	multiple jets -----	1467
Min-tzu t'uan-chieh (periodical):		manufacturing occupations, employ-	
translations -----	21546	ment outlook -----	7392
Minyard, Jimmy D.:		Naval Guided Missiles School, special	
cotton in Iran -----	14292	technology course—	
cotton in Pakistan -----	2347	manual and answer sheet -----	16792-793
Miocene period:		manual and textbook -----	13320
floras from Fingerrock Wash, south-		Polaris firing, Nov. 16, 1963, photo-	
western Nevada -----	18134	graphic record of President	
marine, Astoria formation in Or-		Kennedy's visit -----	5621
egon -----	4790	procurement, unnecessary, due to	
treatment of smaller Foraminifera,		failure to identify and utilize	
southern Okinawa -----	10645	available spare parts, Sth	
Mira, Francesco, relief -----	6388	Army, Korea, Army Dept., GAO	
Miracle of our time, cybernetics and		report -----	12500
problems of development -----	6908	procurement program, pyramiding	
Mirage Flats project, ground water re-		of profits and costs, report -----	8419
sources -----	21362	progress report, 1962-63, Army	
Mirrors:		pamphlet -----	102
mirror device aligns machine sur-		Sidewinder training systems, un-	
face perpendicular to sight		necessary procurement, etc.,	
lines -----	13185	under military assistance pro-	
9 1/2 foot diameter master and		gram, GAO report -----	8740
mirror -----	21727	solid-propellant motors, increased	
MIS, see Material Inspection Service.		costs of ammonium perchlorate,	
Miscellaneous bills, see Bills (congres-		GAO report -----	6769
sional.)		space, publications list -----	18584
Miscellaneous collection series, see		spinning symmetric, pitching and	
Smithsonian miscellaneous col-		yawing motion -----	9575
lection.		Tartar and Homing Terrier, over-	
Miscellaneous papers, see names of de-		procurement of spare fuse com-	
partments, etc., issuing papers.		ponents by Navy Dept., GAO	
Miscellaneous publications, see names		report -----	6780
of departments, etc., issuing		unsatisfactory system, development,	
publications.		procurement, and deployment	
Misses clothing, see Clothing.		by Army Dept., GAO unclas-	
Missiles:		sified summary -----	6782
antitank guided missile (ENTAC),		Missing persons:	
Army field manual -----	11856	act, amend to cover persons de-	
Army Missile Command—RE-TR		tained in foreign countries	
series -----	7661	against will -----	
RG-TR series -----	7662	hearing -----	17866
ballistic, guided and their engines,		law -----	17287
USSR study -----	9298	report -----	15742
ballistic missile series -----	95	Mississippi:	
Bomarc A weapon system, over-		administration of justice, civil	
stated cost estimates included		rights report -----	8155
in target prices of incentive		annual survey of manufactures,	
contracts with Boeing Co., Air		1962, standard metropolitan	
Force Dept., GAO report -----	12492	areas and large industrial	
Defense Dept. military procurement		counties, statistics -----	6030
appropriations, 1965 — hear-		climatological data -----	3329
ings -----	6344, 8358	coastal area, fishery products,	
law -----	8227	wholesale dealers, lists -----	718, 18015
reports -----	6282, 6289, 6319, 6469	electric rate book -----	669, 19695
delta-wing windward pressures, con-		forest industry statistics, 1962 -----	8699
trol surface interaction effects		gastropods from Coffee Sand (Upper	
at Mach number of 6.83 -----	14867	Cretaceous) -----	18126
design of electric systems, technical		labor organizations, reporting,	
manual -----	11497	register -----	16571
fleet ballistic weapon, human fac-		landings, fish and shellfish—	
tors design standards for—		annual summary, 1963 -----	12421
equipment -----	5619	monthly -----	3728
systems -----	5618	late Cretaceous gastropods in Ten-	
guided—		nessee and Mississippi (se-	
Federal Item Identification guides		ries) -----	18125-126
for supply cataloging -----	12297	Mississippi River and tributaries,	
supplements -----	3478	fishery products, wholesale	
fundamentals -----	4236	dealers, lists -----	735, 18026
USSR study -----	5346	municipal waste facilities -----	3104
guiding antiaircraft missiles to tar-		municipal water facilities -----	18909
get, translation of book -----	10834	northern, erosion-control planta-	
Hawk air defense guided-missile		tions, early yield -----	2385
system, unnecessary disposal of		pecan production, economic as-	
spare components, GAO re-		pects -----	17900
port -----	19768	post study, wood preservatives	
homing, infrared equipment, USSR		comparison, 1964 progress	
study -----	12904	report -----	12441
identification of pipe, hose, and		precipitation data, hourly -----	3578
tube lines, military standard -----	21255	sulfur, resources and production -----	20475

# JANUARY-DECEMBER

Entry

1467

7392

793

3320

5621

2500

8419

102

8740

6769

8884

9575

6780

6782

7866

7287

5742

8155

6030

8329

8018

9695

8699

8126

6571

2421

8728

126

8026

3104

8909

2385

7900

2441

8578

0475

Entry

## Mississippi River and Tributaries

project:	
engineer report—	
additional material	15406
departmental editions	15874
document editions	17946-949, 19658
	15403
	17453-456, 19440

## Mississippi River and Valley:

bridge in vicinity of Memphis, Tenn., designate Clifford Davis Bridge, report	8347
bridge near Muscatine, Iowa, and Drury, Ill.—	
hearings	17663
report	10218
bridges, Clinton, Iowa and Fulton, Ill.—	
hearings	17663
report	10210
fisheries, annual summary, 1962	6698
flood control in alluvial valley, engineer report—	
departmental edition	15874
document edition	15403
floodways and outlet, flood control	7462
geology of embayment	12511
light list and other marine aids, Mississippi River system	8173
lower basin, floods, magnitude and frequency	4817
Muscatine, Iowa, project, modify for public park purposes—	
hearings	2123
law	261
report	463

power requirements for high-capacity cotton gins in Yazoo-Mississippi Delta	7892
stages and discharges, 1962	11346
surface water records—	
lower basin, Oct. 1950-Sept. 1960	18145
upper basin, Oct. 1950-Sept. 1960	18144
transportation lines on river system	21280
upper, zinc-lead district, geology (series)	797, 18102-103
water resources of Mississippi embayment (series)	12511
waterborne commerce, 1963	17958

Mississippi River Delta, cotton, fiber and spinning properties, as affected by certain harvesting and ginning practices, 1959-60	13587
Mississippi River Parkway, see Great River Road.	
Mississippi River, Upper, Wildlife and Fish Refuge, see Upper Mississippi River Wildlife and Fish Refuge.	
Mississippian period, floras, analysis of succession	8771
Missoula Valley project:	
reclassification of land of Big Flat unit, Jan. 1963, approve—	
law	12010
report	10263

Missouri:	
annual survey of manufactures, 1962, standard metropolitan statistical areas, and large industrial counties, statistics	6028
climatological data	3829
costs of electric power and fuel for driers in cotton gins	2261
labor organizations, reporting, register	16573
land conveyed to, extend time for construction of improvements—	
hearing	21211
law	21134
reports	17723, 19472

## Missouri—Continued

mineral industry, minerals year-book chapter	1417
--	------

Mississippi River and tributaries, fishery products, wholesale dealers list	8615
municipal waste facilities	8106
municipal water facilities	18911
national electric rate book	12394
northern, establishing vegetation on exposed subsoil	4197
precipitation data, hourly	3578
sulfur, resources and production	20475
women, legal status	7858

Missouri Basin Inter-Agency Committee:	
annual report on progress—	
1963 and programming fiscal years 1964 and 1965	2998
1964 and programming fiscal years 1965 and 1966	18715
minutes—	
1st-131st meetings, index	7463
130th meeting, insert	2999
131st meeting	3000
132d meeting	1447
133d meeting	5499
134th meeting	7464
135th meeting	11347
136th meeting	16649
137th meeting	16650

Missouri River and Valley:	
basin below Sioux City, Iowa, surface waters, Oct. 1950-Sept. 1960, records	15960
development of basin, Interior Dept. program—	12510, 15966
Lewis and Clark Lake, fish population studies	12427
Missouri River Basin, progress—	8941
sedimentation and chemical quality of water in Salt Creek basin, Nebr.	822
snow survey measurements, 1919-63	15090
spillway for Oahe Dam, S. Dak.	19663
surface waters of basin above Sioux City, Iowa, records, Oct. 1950-Sept. 1960	14353
upper basin, Fort Peck Reservoir to Monroney Dam, mineral resources	18669

Missouri River Basin, see Missouri River and Valley.	
Missouri River Basin project:	
additional units, increase appropriations to construct—	
law	17301
reports	6321, 15757
Garrison diversion unit, construction—	
hearings	10317
reports	6463, 15508
Nebraska midstate unit, inclusion—	
hearings	12272, 14007
report	14061
Sherman Dam, design and construction, technical record	13433
Mr. Field Crops Producer, it pays to use chemicals safely	19085

Mistletoe:	
dwarfmistletoe—	
control opportunities in ponderosa pine reproduction	6739
on true firs in California	21324
survey in western Montana	14317

MIT, see Massachusetts Institute of Technology.	
Mitchell, Donald W., rigid foam for mines	7446
Mitchell, George E., census of dental programs in local health department, 1962	16830

Entry

# INDEX 1964

Entry	Entry
Mitchell, George W. : addresses, etc.-----	Mogollon Plateau, Rim region, geology and ground water-----
Feb. 6, 1964-----	2419
Feb. 20, 1964-----	13486
Aug. 10, 1964-----	Mohair, production and value, 1963--
Oct. 21, 1964-----	15905
19706	Mohammedanism, Islam and the East, oriental arts-----
Mitchell, John W., reduced old-age benefits for retired workers under 65 years of age-----	4751
21876	Mohave County, Ariz., manganese ore deposit from Maggie Canyon, Artillery Mountain region, es- timated cost of exploitation-----
Mitchell, Robert G., wind-tunnel test of VZ-2 VTOL airplane with reference to wing stall-----	13115
3014	Mohawk Airlines, Inc., accident-----
Mitchell, Robert T., floodlight trap for capturing blackbirds, etc., at roosts-----	13790
6731	Mohler, Fred L., multiply charged ions survey-----
Mites, psorergates, itch mite, re- ported in New Mexico and Texas-----	14942
16937	Mohler, Stanley E., résumé and index of reports of Civil Aeromedical Research Institute, 1961-62-----
see also Chicken mites.	4312
Mitral valve, replacing with artificial tricuspid valve, USSR study-----	2116
9178	Mohorovicic discontinuity, see Sels- mology.
Mittens, current industrial reports-----	Mohr, Fred W. : industry wage survey-----
11895	hotels and motels-----
Mi Vida uranium mine, Big Indian district, San Juan County, Utah, statistical interpretation of sample assay data-----	18640
21717	machinery manufacturing, Mar.- May 1963-----
Mixers (crystal), see Crystal mixers.	9468
Mixson, John S., investigation of vi- bration characteristics of pres- surized thin-walled circular cylinders partly filled with liquid-----	9469
7555	Molre fringe measuring system for far infrared interferometric spec- trometer-----
Miyauchi, D., application of radiation- pasteurization processes to Pacific crab and flounder-----	4254
19250	Moisture : coal, influence of processing vari- ables on determination-----
Mizen, Mamie L., Federal facilities for Indians, report-----	13116
2228	soil, constants and physical prop- erties of selected soils in Hawaii-----
Mizokami Brothers Produce, see Mizo- kami, Mike, and brothers.	2389
15460, 19553, 21103	see also Water—Water vapor.
Mobile, Ala., principal electric facili- ties, map-----	Moisture meters, neutron-moderation application to coal and soil-----
679	19231
Mobile dwellings, see Trailers.	Molasses : market news-----
Mobility, see Geographic mobility— Mechanical mobility.	3729
Mobility and worker adaptation to eco- nomic change in U.S.-----	5787
5418	Moldavian Soviet Socialist Republic : Academy of Sciences, structure and work-----
Mobility, troop topics-----	11017
11843	public health service-----
Mobilization, see Industry—National defense.	21406
Mobley, Thomas C. : union wages and hours— building trades, July 1, 1963 and trend 1907-63-----	Moldavites from Bohemia and Mo- ravia, Czechoslovakian study-----
13071	5530
local transit operating em- ployees-----	Moldenhauer, W. C., establishing vege- tation on exposed subsoil in southern Iowa and northern Missouri-----
11285	4197
printing industry-----	Molds (botany) : toxic effects on grain, USSR studies-----
14702	14523
Mock, Steven J., ice sheet elevations of southern Greenland-----	Molds (forms) : expandable casting molds for re- active metals-----
8515	18692
Model Reporting Area for Blindness Statistics : conference proceedings, 1963-----	form for 2-way concrete joist floor and roof construction, recom- mendation of trade-----
11449	5547
statistical report, 1962-----	investment casting, new technology, USSR study-----
14958	14513
Model Reporting Area for Mental Hos- pital Statistics : patient movement data, classified by age, sex, etc-----	Molecular biology, see Biology.
16746, 21794	Molecular weight, determination in polyethyleneterephthalate from terminal radicals-----
12th annual conference, presenta- tions of panel members-----	5534
13281	Molecules : activity and structure, relation to physiological activity of gib- berellins, USSR study-----
Modelling of automatic control sys- tems, USSR-----	20730
14438	bounce-back, test device for pre- venting-----
Modern theories of communication-----	14812
4360	diatomic, electronic states-----
Modernization, see Renovizing.	14890
Modoc County, Calif. : disclaim title of U.S. to certain property-----	effect of radiation on hereditary molecular structures, USSR study-----
21118	1008
report-----	free, and slip flows, measurements of efflux patterns and flow rates from cylindrical tubes-----
17689	20606
Modular chassis simplifies packaging and interconnecting of circuit boards-----	heavy-molecule propellants in elec- tron-bombardment thruster-----
13165	16709
Modules, see Nuclear instrument mod- ules.	macromolecular structure of ribo- nucleic acid, problems-----
	9342
	metastable, studies using beam techniques-----
	20935

Entry

2419	Molecules—Continued	
3486	molecular—	
	genetics and effect of radiation	
	on heredity, USSR studies	4895
1751	ion propellants and molecular	
	plasma collision processes	7493
	structure and tensile properties	
	of filament-winding plastics	18862
1115	structure of 2-(4'-amino-5'-aza-	
3790	methenyl pyrimidyl)-3-pentene-	
	4-01	19174
1942	philosophical aspects of life on	
	molecular level, USSR study	1060
	quantum mechanical study	14890
1312	rigid, moments of inertia, Fortran	
2116	program for computing	7508
	Molina, Colo., powerplants, design	
	and construction, technical re-	21862
	port	7401
3640	Moline, Ill., occupational wage survey	
	Mollusks:	
	Astoria formation in Oregon	4790
1948	mollusca of A. A. Gould, illustra-	
4469	tions of types described, etc.	14962
	molluscan shellfish industry, effects	
	of pesticides, water pollution,	405
1254	etc., hearings	
	Tertiary, of Canal Zone and adjoining	
	Panama	6803
1116	upper Jurassic, from eastern Oregon	
	and western Idaho	15952
	Molnar, Ferenc, relief	442, 1876
2389	Molt in northern fur seal	4744
	Molybdenum:	
	alloy sheet, Mo-0.5Ti, oxidation-	
	resistant coatings	18733
	arc-cast, and titanium alloy sheet,	
	bend transition temperature	20583
	content in soils in European part of	
	USSR	18343
	disposal from national stockpile—	
	hearing	13994
1017	law	15394
1406	reports	13935, 14094
5330	electrodeposition of metal from	
	molten electrolytes	13120
	hot rolling conditions in vacuum,	
	argon atmosphere, and in air,	
	USSR study	1011
1197	minerals yearbook chapter	20493
	Mo-0.5Ti alloy at 2,500 F, diffusion	
	effects of oxidation resistant	
	coatings, studies	18732
1523	niobium-molybdenum-zirconium ter-	
	nary system, USSR investiga-	
3692	tion	4907
	report, monthly	3730
5547	rolled single crystals, deformation	
	textures, etc.	20511
1513	silicide coatings, effect of stresses	
	on quality, USSR study	1012
	Molybdenum carbide, heats of com-	
	bustion and formation	5484
5534	Molybdenum disulfide:	
	lubricating spacecraft mechanical	
	components, adaptation of	
	MoS <sub>2</sub> in situ process	13229
0730	motor brush, molybdenum disulfide-	
	silver	13191
1812	Molzon, Arnold E., plastics, subject	
4890	index, bibliography, etc., of	
	technical conference papers	564, 19619
	Moments:	
	bending, data from ships at sea	7725
1008	bending, within midship half length	
	of Mariner model in extreme	
0606	waves	18937
	midship bending moments experi-	
3709	enced in extreme regular	
	waves—	
	Mariner type ship	7726
9342	models, summary of investiga-	
	tion	7728
0935	tanker and destroyer models	7727

Entry

	Moments of inertia, rigid molecule,	
	Fortran program for comput-	
	ing	7508
	Moments of sampled binomially dis-	
	tributed variable	13332
	Momentum, see Motion.	
	Le Monde (periodical):	
	indexes	892,
	1116, 2622, 5084, 6980,	8946,
	10756, 11200, 12988,	16177,
	18222, 19954, 21384.	
	Mondry, Leo M., relief	14047
	Mones, Gerda S., retail sales, 1963	13767
	Monetary policy, see Money.	
	Money:	
	alternative approach to monetary	
	mechanism	21202
	and bank credit, 1963	6685
	banking and monetary statistics,	
	1963	12403
	circulation statement	3320
	code of Federal regulations	8574
	counterpart funds and AID foreign	
	currency accounts	3384
	demand deposits adjusted, and cur-	
	rency outside banks	3413
	effects of monetary action, evaluat-	
	ing (remarks)	6687
	Federal Reserve's attachment to	
	free reserve concept	15585
	Federal reserve monetary policy	
	making, analysis	21202
	flows and balance of payments ad-	
	justment (remarks)	20861
	foreign currencies—	
	reservations and conversions	5729,
		19003
	Treasury Department opera-	
	tions and policies (statement)	1642
	U.S.-owned, hearings	6356
	foreign exchange rates—	
	monthly	3521
	weekly	3522
	international monetary system,	
	functioning and possible re-	
	form, hearings	4424
	its uses and abuses, remarks	6688
	know your money	9757
	monetary and credit developments	15904
	monetary policy—	
	and balance of payments (re-	
	marks)	2826
	challenge of change (remarks)	684
	growth and expansion (remarks)	13829
	monetary system, consolidated con-	
	dition statement	3268
	open market rates	3516
	potentialities of our international	
	payments system (remarks)	13502
	prevalent policy and its consequen-	
	ces, analysis	13997
	reserved foreign currencies, use in	
	lieu of dollar for current ex-	
	penditures, report	6462
	shopping, publications, list	15038
	supply series, revision	14257
	unclaimed funds held in trust by	
	Government of District of Co-	
	lumbia, maintenance of per-	
	petual accounts, eliminate—	
	law	1940
	reports	479, 2038
	see also Dollars—Public funds.	
	Mongolia:	
	archeological exploration, 1961-62	10911
	economic geography	10835
	laws and legal documents	21588
	magma deposits, geographical dis-	
	tribution	14528
	main economic zones of Mongolian	
	People's Republic, experience	
	in defining, USSR study	11007
	natural regions and river runoff	1211
	new landmark in geological study,	
	USSR study	7165



# INDEX 1964

	Entry		Entry
Mongolia—Continued		Monroe County, N.Y., population, special census	19304
People's Revolutionary Party, history	14565	Monrovia, Liberia, port, transfer of title, agreement with Liberia	15110
permanent and seasonal frozen ground	16027	Montana:	
translations	906,	annual survey of manufactures, 1962, standard metropolitan areas and large industrial counties, statistics	6032
1105, 2520, 2902, 5173, 5328,		Belt series, and related rocks with stratigraphic classification	4786
7175, 7282, 10828, 12841, 15999,		Christmas tree exports, reach lowest level since survey was begun	21326
16119, 16335, 16413, 18297,		climatological data	3329
18533, 18596, 19972, 20073, 20248,		electric rate book	21307
Mongolian People's Republic, see Mongolia.		electric smelting of titaniferous iron ores	18681
Moniteau County, Mo., soil survey report	18952	flood damage, hearing	19521
Monitoring:		Hebgen Lake earthquake, Aug. 17, 1959	8769
electrocardiograms on actively exercising subject, simple, inexpensive way	19178	labor organizations, reporting, register	16574
medical, use of automatic logical devices, USSR study	10741	mineral and water resources	2240
visual, 6 hours, effects of visual display mode	17012	mineral industry, minerals yearbook chapter	1418
see also Radiation monitoring.		municipal waste facilities	3108
Monkeys:		municipal water facilities	18913
cortical fibers in retina, USSR study	10961	natural resources	8795
dopane toxicity reduced with aminothylisothiuronium (AETH), USSR study	7344	precipitation data, hourly	3578
extirpation of cervical lobes, visual analyzer, structural changes, USSR study	12757	regenerating lodgepole pine following clear cutting	18062
Macaca mulatta, chronic irradiation, latent effects on longevity and peripheral blood elements	73	snow survey and soil moisture measurements	18950
platyrrhine monkeys, behavior patterns of night monkey	21870	southwestern, stratigraphy and petrology of Permian rocks	15946
rhesus, radioprotection with AET-cysteine	19179	titanium placer resources	7444
Mono County, Calif., air water temperatures and stream flow data, Convict Creek	10577	upper Missouri River basin, mineral resources	18669
Monocacy Battle Centennial Day: designate—		water supply outlook and snow surveys	4140
law	13905	western—	
reports	14086	dwarf mistletoe survey	14317
Monoculars, wide-angle, overlapping, for pilot's field of vision, evaluation	9610	tungsten resources	2096
Monofilament gill net fishing for skipjack tuna in Hawaiian waters, 1961-62	15916	women workers, 1960	7867
Monographs, see names of departments, etc., issuing monographs—also subjects.		see also Blackfeet Indian project.	
Monolayers, see Monomolecular films.		Montauk Point, N.Y., to Manasquan, N.J., coastal warning facilities chart, 1964	13523
Monomolecular films, behavior of monolayers of progressively fluorinated fatty acids adsorbed on water	5592	Monte Carlo method:	
Monopole phased-array feed for spherical reflectors	13632	calculation of nuclear collision density of primary galactic protons in slab of aluminum	9571
Monopolies:		computation of statistics of mid-course velocity corrections for lunar mission	11416
Antitrust and Monopoly Subcommittee, activities, 1963, report	12209	simulating mineral deposits	16843
antitrust laws—		solution for highly rarefied ionized gas flowing through channel with transverse magnetic field	21768
administration, investigation—		Montemayor, Pedro B., Jr., relief	243
authorization, report	6449	Monterey County, Calif.:	
expenses, report	17808	geology of Cosio Knob and Espinosa Canyon quadrangles	12506
Investigation, professional boxing, hearings	14150	geology of Reliz Canyon, Thompson Canyon, and San Lucas quadrangles	4776
price discrimination legislation, hearings	14149	land exchange—	
Clayton act, amend, hearings	540	law	17432
Monostable circuit with tunnel diode	14816	reports	17526, 17827
Monroe, Watson H., studies of pre-Selma Cretaceous core samples from outcrop area in western Alabama	18107	truck crop production practices	2260
Monroe, La.:		Monterey pine, see Pine.	
Ouachita River, engineer report—		Montes Apenninus, LAC 41, lunar chart	20968
departmental edition	17951	Montes Rhiphaeus, LAC 76, lunar chart	17000
document edition	17458	Montezuma Castle National Monument, general information	3062
		Montgomery, David, secular and non-secular behavior for cold plasma equations	13233
		Montgomery, Ala., geology and ground-water resources	6812

# JANUARY-DECEMBER

Entry

9304

1119

3032

4786

1326

3329

1307

3681

9521

8769

6574

2240

1418

3108

8913

8795

3578

8062

8950

5946

7444

8069

4140

4317

2996

7867

3523

9571

1416

6643

11768

243

2506

4776

17432

17827

2260

20968

17000

3062

13233

6812

Montgomery County, Ala., geology and ground-water resources----- 6812  
Month-end storage in major reservoirs in Pacific Northwest----- 4058  
Monthly:-----

NOTE.—For all publications which begin with the word "Monthly", see subject, or name of department, etc., issuing publication.

Months, see American Heart Month—Senior Citizens Month.  
Montmorillonite components, modal analyses and calculation of composition, derivation, reproducibility and accuracy----- 18127  
Montoya, Judy W., mineralogical investigation of beryllium-bearing tuff, Honeycomb Hills, Juab County, Utah----- 9524  
Montpelier, Vt.:  
District Court term to be held—law----- 12007  
report----- 10240  
Monuments, development of isotope techniques for relocation of land monuments, report----- 19253

Moon:-----  
circumlunar mission, guidance using radar tracking and on-board observation data----- 9597  
configurations for lunar landing having various landing-gear arrangements----- 7500  
crater floors, photometric properties----- 18796  
crew performance during real-time lunar mission simulation----- 20591  
determining nodal arrival times from precessing near-earth parking orbits having various inclinations----- 18770  
earth system, consideration of small body in vicinity of stable liberation points----- 7557  
exploration systems for Apollo----- 7471, 9536  
gravitational field, simulation, technique----- 21774  
gravity-simulation technique for studies of man's self-locomotion in lunar environment----- 9581  
history of lunar atmosphere and possibility of ice and organic compounds existing on moon----- 20625  
landing, reasons for attempt----- 11426  
landing trajectories, study with reference to lunar-orbit-rendezvous, etc----- 3015  
lunar charts-----  
LAC 39, Aristarchus----- 4255  
LAC 40, Timoccharis----- 1740  
LAC 41, Montes Apenninus----- 20968  
LAC 58, Copernicus----- 15228  
LAC 76, Montes Rhiphaeus----- 17000  
LAC 80, Langrenus----- 7991  
LAC 94, Pitatus----- 15229  
lunar landings from synchronous orbit, thrust-vector orientation technique during manual control----- 14853  
lunar missions-----  
abort scheme for landings----- 14871  
minimum crew space habitability----- 7505  
Monte Carlo computation of statistics of midcourse velocity correction----- 11416  
orbit-launched nuclear vehicles, performance evaluation procedure----- 11380  
vehicles-geometric constraints on trajectories for recovery----- 5881

Entry

Moon—Continued  
lunar surface-----  
dust bombardment----- 3033  
infrared radiation coefficients and differences in parameter  $\gamma = (\text{kpc}) - \frac{1}{2}$  for seas and continents, USSR study----- 20050  
radio communication----- 20640  
studies, bibliography----- 14798  
lunar transfer orbit ephemeris deviation, technique----- 21747  
new assault is coming soon, Bulgarian study----- 9283  
perturbations, influence of form of moon on motion, USSR study----- 6996  
phototype lunar transponder----- 19157  
position fix for lunar trajectories, accuracy----- 7539  
powered-descent trajectories for manned lunar landings, study----- 18756  
Project Ranger investigation—  
hearings----- 12154  
report----- 12104  
radiation shields effectiveness for thermal control of vehicles on sunlit side----- 9578  
Ranger VII—  
photographs----- 21741  
special report----- 18800  
special report to Congress----- 16784  
research, bibliography----- 5872  
return trajectories, entry range and landing lighting conditions----- 7527  
secular perturbations, Halphen's method applicable to long range effects in motions of celestial bodies----- 9618, 14902  
soft lunar landing of spacecraft, touchdown dynamics analysis----- 5510, 14842  
space, accuracy of navigation with various combinations of on-board optical measurements----- 18774  
strength and structure----- 9616  
surfaces—  
application of penetrometers to study of physical properties, physical state and nature, lunar radio emission----- 14911  
use of hf lunar reflection circuit in study of ionospheric electron density----- 5609  
Moore, A. D., DDT and DDE residues in soil at Beltsville, Md., aerial test circle----- 14329  
Moore, Betty M., crude petroleum and petroleum products----- 1400  
Moore, E. J., economic factors influencing educational attainments and aspirations of farm youth----- 10453  
Moore, Ellen J., miocene marine mollusks from Astoria formation, Oregon----- 4790  
Moore, Elmer J., rural recreation enterprises in New England----- 17901  
Moore, Evelyn A., directories in science and technology----- 5455  
Moore, George E., Jr., bedrock geology of Kingston quadrangle, R.I.—Moosehorn National Wildlife Refuge, general information----- 19731  
Moosic, Pa., railroad accident----- 4877  
Morale:-----  
benefits for defense contractor employees, cost aspects—  
hearings----- 17632  
report----- 21200  
Morality, see Conduct of life—Ethics.  
Moran, Francis J., use of 2-degrees-of-freedom gyroscope as satellite yaw sensor----- 7531

# INDEX 1964

	Entry		Entry
Moravia, moldavites, Czechoslovakian study.....	5530	Morris, Hal T.: geology of Eureka quadrangle, Utah and Juab Counties, Utah.....	8755
Morbidity: helminthiasis rate and control measures in RSFSR, USSR study.....	9159	geology of Tintic junction quadrangle, Tooele, Juab, and Utah Counties, Utah.....	6797
morbidity and mortality weekly report.....	3754	Morris, Marian G., social signs of abusive parents are helpful in efforts toward prevention of child abuse.....	11920
see also Diseases of animals.		Morris, Robert C., value losses in southern hardwood lumber from degrade by insects.....	18085
Morehouse, Alanson D., use and handling of compressed gases.....	5419	Morrison, Roger B., Lake Lahontan, geology of southern Carson Desert, Nev.....	10639
Morey, George W., phase-equilibrium relations of common rock-forming oxides except water, data of geochemistry.....	14343	Morrison, W. W., market your fresh apples.....	20928
Morgan, Howard E., motels.....	11604	Morrison County, Minn., geology and ground water conditions.....	4813
Morgan, Roy L.: addresses, etc.....		Morriss, E. Frances, cotton statistics.....	1721, 19102
Nov. 7, 1963.....	223	Morristown National Historical Park: additional lands.....	19409
Jan. 9, 1964.....	4413	law.....	2091, 17843
Jan. 17, 1964.....	4409	reports.....	13303
Mar. 24, 1964.....	8178	general information.....	
April 14, 1964.....	8179	Morrow, Glenn D., Federal income tax reductions and small business.....	20783
June 5, 1964.....	11969	Morse, R. M., oceanographic observations, North Atlantic Ocean station Echo, 35° N, 48° W.....	13814
Aug. 17, 1964.....	15365	Morse, Robert W., nomination, hearing.....	14127
Sept. 11, 1964.....	17160	Morse, Wayne, testimony, hearings.....	12281
Sept. 14, 1964.....	17159	Mort, Kenneth W., effectiveness of 3 exit vane cascade configurations for vectoring thrust of ducted fan.....	20575
Sept. 24, 1964.....	19362	Mortality, see Death.	
Sept. 28, 1964.....	19360	Mortensen, Ernest, tropical and subtropical horticulture handbook.....	14398
Oct. 14, 1964.....	21097	Mortgage insurance: companies, Federal Home Loan Bank Board inquiry, statement.....	14238
Oct. 19, 1964.....	19353, 21098	dealers and individuals subject to certain sections of title 1, National housing act, list.....	4692
Oct. 27, 1964.....	21098	FHA foreclosures, necessity for corrective legislation, etc., hearings.....	8438
Oct. 28, 1964.....	21096	home mortgage transactions, FHA data.....	4693, 14241
Morgan, Thomas E., jr.: effects of prolonged exposure to oxygen at total pressure of 190 mm. Hg.....	71	selected housing areas.....	4694, 14242
physiologic effects of exposure to increased oxygen tension.....	5895	States.....	
Morgan City, La. to Apalachicola, Fla., coastal warning facilities, chart, 1964.....	9879	homes.....	
Morhauser, Edward G., relief.....	21180	FHA expenditures to correct defects, hearings.....	2233
Moriya, Misako, relief.....	299, 1896	FHA regulations.....	17974
Moriyama, Iwao M., change in mortality trend in United States, etc.....	7705	amendments.....	2320, 4695, 6633, 14243, 17975
Morlock, Maud: broadened horizons of homemaker services.....	19316	hospital construction, hearings.....	8387
homemaker services.....	10084	increased risk of loss to FHA because of inadequate servicing activities, GAO report.....	6770
Morocco: investment guaranties, agreement, market for U.S. products, international commerce, supplement.....	3151	minimum property standards for urban renewal rehabilitation.....	4699
Morphine, effect of cold exposure on action of morphine in rats and mice.....	7980	mortgagee's handbook, home programs, FHA manual, revisions.....	660, 8549
Morphogenesis: crystalline lens, USSR study.....	16152	project, FHA regulations.....	17977
USSR studies.....	16488	amendments.....	4696, 6634-35, 10521, 14244-245, 15892, 17976
Morphology: changes in human morphological arterioplasty with lavsan prosthesis, USSR study.....	14612	secondary market facilities for conventional home loans, establish, hearings.....	526
embryo whale shark.....	7597	urban renewal areas, utilizing FHA sec. 221(d)(3) below market interest rate.....	16903
glacial stream, White River, Mount Rainier, Wash.....	4791		
lead dioxide in positive plates of lead acid cells.....	15007		
Mohorovicic discontinuity and its structural significance.....	20331		
morphologic characters in Avena, inheritance.....	16974		
USSR— research.....	1071		
studies.....	9166, 10761		
Morrell, Gerald, breakup of liquid jets by shock waves and applications to resonant combustion.....	18754		
Morris, Charles B., stresses within curved laminated beams of Douglas-fir.....	8640		
Morris, Garland J., response of jet trainer aircraft to roughness of 2 runways.....	11390		

# JANUARY-DECEMBER

	Entry
Mortgage insurance—Continued	
Veterans Administration to extend aid on account of defects—	
hearing	8404
report	15706
Mortgage Insurance and Marketing Corporations Joint Board, establish, hearings	526
Mortgage Insurance Corporations, establish, hearings	526
Mortgage Marketing Corporations, establish, hearings	526
Mortgages:	
farm—	
lending experience of life insurance companies, etc.	8477, 12317, 19622
foreclosures—	2265
FHA, necessity for corrective legislation, etc., hearings	8438
number and rate, by FSLIC insured savings and loan associations	3807
six metropolitan areas	10669
home—	
estimated debt and financing activity	3446, 8544
FHA trends	3505
interest rates and terms	3576
programs, mortgagee's handbook, FHA manual, revision	8549
interest rates on conventional loans, largest insured savings and loan associations, summary	3755
nonfarm—	
investments of life insurance companies, 1963	15889
real estate foreclosure report	3797
recording letter	3756
savings and mortgage activity, selected balance sheet items	3543
savings and mortgage lending activity	3250
Veterans Administration, sell participations, hearing	8404
Morton, James G.:	
addresses, etc.—	
Jan. 17, 1964	4412
Feb. 25, 1964	6124
Apr. 16, 1964	10126
June 22, 1964	13821
Oct. 26, 1964	21093
Morton County, Kans., soil survey report	5694
Mosby, Mont., geology of Winnett-Mosby area	8756
Moscow, Russian SFSR:	
Africans in Moscow, disillusionments	6881
education and cybernetics	17918
Frunzenskiy Rayon, party educational work	20122
motor vehicle plant imeni Likhachev reconstruction	7226
Moscow Geological Prospecting Institute, geological engineers, training	21594
Mosquitoes:	
bloodsucking, larvae of Culicinae of North Vietnam, study	21413
labelling, with radioactive phosphorus, USSR study	2554
Motels:	
bibliography	11604
employees, coverage under Fair labor standards act, provide, hearings	19507
housekeeping aide, suggested training program	15848
see also Motor courts.	
Motes (in cotton):	
reclaiming and marketing cotton gin motes	14169

	Entry
Mother Benedetta, see Mereghetti, Maria.	
Mother Cherubina, see Colombo, Annunziata.	
Mothers:	
employment and child rearing, personal and family factors	8144
health services, grants to combat mental retardation, comments	2128
maternity care, current problems (lecture)	197
progress in collaborative perinatal research, nation-wide mother-child study, summary	16752
tropical, health education in feeding her young child	10080
unmarried, and school—	19314
working—	
job-related expenses	6053
maternity protection and benefits in 92 countries	7862
Moths:	
bagworm moths of Western Hemisphere	13295
genus Gonioterma, new Brazilian species	7606
genus Rhabdatomis Dyar (Arctidae, Lithosiinae)	7600
North American, family Walshidae, review	9651
see also Gonionota melobaphes Walsingham—Microlepidoptera—Stenomidae—Tip Moths.	
Motion:	
electrons, slow, probability of collision for momentum transfer in nitrogen plasma afterglow	20526
mechanics, Naval Guided Missiles School, trainee's manual	16792
answer sheets	16793
mobility of positive ions in their own gas, average momentum-transfer cross section determination	16713
pilots during 2-axis tasks, measured transfer functions	9582
spiral, of gas between cylinders in presence of magnetic field	20628
see also Equations of motion—Three-body problem.	
Motion picture projectionist's manual	11485
Motion pictures:	
Agriculture Department—	
handbook	16944
monthly list	3741
classification bulletin	20716
copyrighted—	
Jan.-June, 1963	6530
July-Dec. 1963	14158
film catalog, Interior Department	12540
Government films for public educational use, 1963	17929
industry, review of 1963, outlook for 1964	4327
Library of Congress catalog	3678
industry, review of 1963, outlook medicine and allied sciences, film reference guide	18898
National Aeronautics and Space Administration, 16mm film lists	13264, 18799
Navy fleet motion picture service manual	15000
Public Roads Bureau, films available	13427
radiation in perspective, illustrated text of film lecture	4310
realism, Soviet view	9117
USSR—	
documentary, ideological content	8880
educational aids	8953

Do not order from index; see indicated entry

Page 441



# INDEX 1964

	Entry		Entry
Motion pictures—Continued		Motor vehicles—Continued	
utilization under national defense		Federal item identification guides	
education act, news and reports	17928	for supply cataloging	12289
your meat inspection service, film		supplements	3470
for TV use	1688	Government employees in Alaska,	
Motion sickness, urinary catecholamines	1742	transportation of private vehicles—	
Motivation, missing link (address)	13028	law	6177
Motivation (psychology):		report	4547
vocational rehabilitation staff		Government passenger carrying, establish safety standards—	
training guides	7834	law	17374
Motive power, <i>see</i> Power.		report	17759
Motor buses, <i>see</i> Motorbuses.		industry wage survey	5439
Motor carriers:		interagency motor pool systems	
automatic data processing procedure of highway Form B, 6-62, using RCA 301 computer, explanation	10713	service guide	15938
certain employees, exemption from maximum hours, code of Federal regulations	7839	liability insurance, Army regulations	18670
class 1, revenues, etc., passengers, quarterly	3982	manufacturing, employment outlook	7395
class 2, revenues, etc., property, quarterly	4029	Moscow, RSFSR, plant, reconstruction	7226
cost of transporting freight	4872-73, 18189	operated on Federal-aid systems, maximum desirable dimensions and weights	19445
cost study, freight transportation employees, exemption from maximum hours under Fair labor standards act	8837	operation by disabled persons in interstate commerce, hearing	21207
freight commodity statistics	19014, 12568, 19829	parts, industry wage survey	5439
inspection of buses, 1960-62	12567	road-user and property taxes, 1964	7715
property, road check results	14407	role in transportation, efficient utilization, USSR study	18219
transport statistics, 1962	4881, 8844, 12573	seat belts sold or shipped in interstate commerce, meet safety standards—	
<i>see also</i> Motor vehicle accidents.		law	1980
Motor courts, industry wage survey, hotels and motels	18640	report	491
Motor cycles, <i>see</i> Motorcycles.		uneconomical leasing for use in assembly and checkout operations at Minuteman missile launch sites and avoidance of congressional controls relating to acquisitions, GAO report	19762
Motor fuel:		uneconomical replacement by 5th Air Force, Fuchu Air Station, Japan, GAO report	6783
aircraft tank vent fires and explosions caused by atmospheric electricity	7550	USSR—	
taxation of fuel consumed by interstate buses, consent of Congress to compact, report	17733	industrial development, translations	2494, 2601, 5056, 6995, 7226, 7295, 9083, 9275, 12601, 14493, 16029, 18219, 18357, 18450, 19853, 19932, 20023, 20039, 20215, 20281, 20292
<i>see also</i> Gasoline.		transportation developments	2850, 8846
Motor trucks, <i>see</i> Motortrucks.		world production and registration, 1962-63	151
Motor vehicle accidents:		<i>see also</i> Motor carriers.	
investigation reports	874, 4876, 6864-65, 8840, 10714-715, 14404-405, 21378	Motorbuses:	
involving fire, 1959-62, ICC analysis	12566	Federal use tax on buses	19820
large motor carriers of property, accident data, analysis	870	inspection of buses, 1960-62	12567
main rural highways, related to speed, driver, and vehicle	20774	interstate, taxation proration and reciprocity, consent of Congress to compact, report	17733
mechanical defects, 1962, analysis	871	Motorcycles:	
motor carriers of property, accident data	3758	Federal item identification guides for supply cataloging	12289
Motor vehicle operators:		supplements	3470
driver selection and training, technical manual	10015	Motors:	
employment outlook in driving occupations	9426	idle drive, disengaged by quick-acting clutch	20549
learners' permits in D.C., increase fees—		motors and generators, current industrial reports	1815, 6045, 17098
law	8226	<i>see also</i> Electric motors.	
reports	480, 6322	Motortruck drivers and helpers, union wages and hours	14701
limitation, Kentucky program on medical aspects	20760	Motortrucks:	
Motor vehicles:		industry, review of 1963, outlook for 1964	6019
accidents related to vehicle on main rural highways	20774	light-truck highway train, research on construction and testing	15136
emergency towing, exemption from interstate commerce act—			
law	1937		
report	490		
exhaust, removal of hydrocarbons and carbon monoxide using promoted uranium catalyst	1441		

# JANUARY-DECEMBER

	Entry		Entry
Motortrucks—Continued		Mouth—Continued	
military $\frac{1}{2}$ -ton, unnecessary costs		oral cancer, can you answer these	
resulting from noncompetitive		questions?-----	18894
procurement, Army Dept., GAO		oral exfoliative cytology, value in	
report-----	18093	cancer diagnosis, Veterans Ad-	
M151 utility, major assemblies, un-		ministration study, 1962-----	7828
necessary, planned procurement		Mouth protectors:	
report, Army Dept., GAO report-		football—	
operating costs of farmer cooper-		acceptability by high school	
atives-----	12358	players-----	7687
production report, monthly-----	3742	players, play it safe-----	16841
prospects for bright future for		players, your best defense-----	16848
transportation industry (re-		Mower, Reed W., appraisal of poten-	
marks)-----	19358	tial ground-water salvage along	
receiving facilities, selecting best		Pecos River between Acme and	
capacity for country grain ele-		Artesia, N. Mex.-----	8779
vators-----	13592	Moyer, Forrest T.:	
Motortrucks in freight service:		employment and injuries—	
for-hire trucking of exempt farm		metal and nonmetal industries---	20471
products-----	7932	minerals industries-----	21688
intercity trucking industry, re-		injury experience in coal min-	
view of 1963, outlook for 1964-		ing-----	2983, 20477
interstate hauling, California-Ari-		national safety competition of	
zona fresh fruits and vege-		1962-----	16627
tables-----	16959	Moyer, James E., microbiologic studies	
truck and cartage, bibliography---	13445	of 2-man space cabin simula-	
Motts, Ward S., artificial recharge		tor-----	11806
to ground-water supplies, Ros-		Moynihan, Daniel P., address, Sept.	
well Basin, N. Mex.-----	19805	11, 1964-----	18607
Mouat mine, mining methods and		Moynihan, M., some behavior patterns	
costs-----	5475	of platyrrhine monkeys, 1.	
Moulds, Donald E.:		Night Monkey-----	21870
antimony-----	20466	Mozambique, see Portugal, East Af-	
bismuth-----	14730	rica.	
lead-----	21695	MR series-----	9687
Mound City Group National Monu-		Mramor, Frank, relief-----	314, 17208, 21222
ment, general information-----	11468	MRIR-PCM (medium resolution in-	
Mount, see name of mountain, except		frared-pulse code modulation	
when "Mount" occurs as first		telemetry, see Telemetry.	
word of town, etc.		MRL, see Aerospace Medical Research	
Mount Hope Bay, bridge, Rhode Is-		Laboratories.	
land to maintain, operate,		Mucilage, Federal standard-----	12410
etc., hearings-----	2123	Muckler, F. A.:	
Mt. Jefferson Primitive Area:		control system lags and man-ma-	
reclassification proposal-----	2369	chine system performance-----	14791
study and reclassification-----	2393	use of man in booster guidance and	
Mt. Jefferson Wild Area, proposal---	2369	control-----	14789
Mount McKinley National Park, gen-		Mucous membrane, duodenal, restora-	
eral information-----	14973	tive processes following radia-	
Mount Morrison quadrangle, Calif.,		tion injury, USSR study-----	2644
geology and mineral deposits---	6804	Mueller, Eva, Negro-white differences	
Mount Rainier National Park:		in geographic mobility-----	17024
concession facilities, revenues due		Muffling devices:	
Govt. illegally expended for re-		shape and exit noise of rock-drill	
habilitation, etc., GAO report---	21340	exhaust muffler-----	13126
general information-----	18829	testing designs to quiet noise from	
geology-----	4796	pneumatic rock drills-----	5491
Mount Rose quadrangle, Nev., vol-		Mugridge, Donald H., Presidents of	
canic geology, structure, and		United States, 1789-1962-----	5457
mineral deposits-----	19788	Muir, Kenneth S., geology and	
Mount Rushmore National Memorial,		ground-water of San Antonio	
general information-----	9658	Creek Valley, Santa Barbara	
Mount Wheeler Mines, continuous		County, Calif.-----	12520
floatation of bertrandite and		Mullen, D. H.:	
phenacite from beryllium ores.		mineral industry of Colorado-----	1408
Mountain beaver, see Beavers.		mineral industry of North Da-	
Mountain slide and rescue operations		kota-----	1422
in Uzbekistan-----	12864	Mullen, John P., investigating ion-	
Mountain States, see Rocky Mountain		ospheric ducting with ORBIS	
States.		beacon-----	5875
Mountaineering, biochemistry of Al-		Mullens, Thomas E., geology of	
pine climates-----	12971	Paradise quadrangle, Cache	
Mountains, gravimetric survey, com-		County, Utah-----	19778
puting effect of relief, USSR		Mulligan, John J., Willett Range coal	
study-----	7279	deposits, Victoria Land, Ant-	
Mourning doves, see Pigeons.		arctica-----	2995
Mouth:		Mullins, Richard H., market factors	
ascorbic acid levels in blood and		in Peru-----	18173
urine as related to oral health		Multimeters, portable DC, Rawson	
status-----	1746	type 501A, instrument calibra-	
enzyme activity analysis as method		tion procedure, technical man-	
for evaluation of action of		ual-----	11511
oral preparations-----	72		
maxillo facial and oral health,			
military research-----	11850		

# INDEX 1964

Entry	Entry
Multinodose scaphitid cephalopods from lower part of Pierre shale and equivalent rocks in conterminous United States.....	18138
Multiphase fluids in porous media, review of theories pertinent to hydrologic studies.....	4789
Multiple jobholders in May 1963.....	5449
Multiple regression prediction equation, see Equations.	
Multiple sclerosis, progress in research, summary.....	14954
Multivibrators, astable, driven by temperature-sensitive network.....	20548
Mulvihill, James W., cost estimates of processes for separating mixtures of methane and hydrogen.....	20506
Mumford, Bessie C., list of intercepted plant pests, 1963.....	7899
Muncie, Ind., accident.....	14405
Mundorff, James C.: fluvial sediment in Klowa Creek basin, Colo.....	21364
sediment discharge during floods in eastern Nebraska.....	18121
Mundorff, M. J.: geology and ground-water conditions of Clark County, Wash., with description of major alluvial aquifer along Columbia River.....	12517
ground water for irrigation in Snake River basin in Idaho.....	15956
Municipal and cooperative distributors of TVA power, 1963 operations.....	3171
Municipalities, see Cities and towns.	
Munitions, armament kit, equipment for helicopter, flight evaluation.....	13621
Munnerlyn, R. D., helium-bearing natural gases of U.S., analyses.....	1398
Munse, Albert R.: public school finance program, 1961-62, Puerto Rico.....	4633
public school finance program, 1962-63— American Samoa.....	4634
Canal Zone.....	4635
Colorado.....	593
District of Columbia.....	4636
Georgia.....	4637
Guam.....	2281
Louisiana.....	4638
Maine.....	4639
Maryland.....	2282
Michigan.....	2283
Minnesota.....	17922
Nebraska.....	2284
New Hampshire.....	4640
New Jersey.....	4641
North Carolina.....	4642
North Dakota.....	594
Oklahoma.....	595
Rhode Island.....	596
Texas.....	4643
Virgin Islands.....	8493
Wisconsin.....	305, 1902
Murgelj, Ana, relief.....	
Murphy, Charles S.: addresses, etc.— Oct. 8, 1963.....	1692
Oct. 18, 1963.....	1717
Nov. 13, 1963.....	5811
Dec. 5, 1963.....	5855
Dec. 12, 1963.....	5827
Dec. 13, 1963.....	5820
May 18, 1964.....	13577
Murphy, Elenor G., economic forces in United States.....	2962
Murphy, George W., demineralization of saline water by electrically-induced adsorption on porous carbon electrodes.....	8802, 10676
Murphy, J. S., turbulent boundary layer noise as related to design criteria.....	11394
Murphy, John S., relief.....	446, 10386, 11994
Murphy, Louise R., education directory, 1963-64, pt. 1, State governments.....	6562
Murphy, Randall E., hydrodynamic wave tube.....	1738
Murphy, Robert T., address, Sept. 11, 1964.....	17122
Murphy, Sandra B., relief.....	439, 1874
Murray, Barbara M.: directory of International Confederation of Free Trade Unions.....	4870
directory of labor organizations, Western Hemisphere, Antigua, Grenada, Guatemala, Venezuela.....	21376
Murray, John B., State supervisors of pupil transportation, directory.....	4647
Murray, Roland V., labor and material requirements for civil works construction by Corps of Engineers.....	13069
Murray, Tina J., copper industry in Soviet Union.....	1792
Murtha, B. E., UO <sub>2</sub> fuel systems for water reactor applications.....	5956
Musca domestica, see Flies.	
Muscatine, Iowa: bridge across Mississippi River— hearings.....	17663
report.....	10218
project on Mississippi River, modify for public park purposes— hearings.....	2123
law.....	261
report.....	463
Muscatine Bridge Commission: construct bridge across Mississippi near Muscatine, Iowa, and Drury, Ill.— hearings.....	17663
report.....	10218
Muscle relaxants: use— all-Union symposium, USSR.....	10962
data on, USSR study.....	5309
surgery, USSR studies.....	21448
Muscles: human skeletal, electromyography of tone in normal and pathological state, USSR study.....	5096
peripheral, occupational diseases of, USSR study.....	1039
skeletal and smooth, recording contractions, USSR study.....	19836
synchronization of motor units and related model representations.....	11226
tissue, effect of fractional X-ray irradiation on activity of hexokinase and aldolase, USSR study.....	16308
unfatigued, working capacity, physiological analysis of effects of preceding muscular efforts, USSR study.....	16271
Muscovite: heat and free energy of formation.....	7436
high temperature heat contents and entropies and dehydrated muscovite.....	7449
Muse, Dorothy, how to find U.S. statutes and U.S. codes citations.....	6365

6  
 4  
 6,  
 4  
 32  
 38  
 22  
 74  
 70  
 76  
 47  
 69  
 92  
 56  
 63  
 18  
 23  
 61  
 63  
 63  
 18  
 62  
 309  
 448  
 096  
 039  
 836  
 226  
 308  
 271  
 436  
 449  
 365

6  
 4  
 6,  
 4  
 32  
 38  
 22  
 74  
 70  
 76  
 47  
 69  
 92  
 56  
 63  
 18  
 23  
 61  
 63  
 63  
 18  
 62  
 309  
 448  
 096  
 039  
 836  
 226  
 308  
 271  
 436  
 449  
 365



# INDEX 1964

Entry	Entry
Nagy, John: experimental coal-dust and gas ex- plosions..... 5490	NASA SP series..... 1450-51, 3004, 5501-3, 7477-79, 9539-41, 11358-365, 13155-159, 14795- 799, 16664-668, 18727-729, 20536-541, 21741-744.
preventing ignition of dust disper- sions by inerting..... 21713	NASA tech briefs..... 7480-91, 9542-63, 11367-377, 13160-210, 14800-832, 16669-676, 20542- 565, 21745.
sealing coal-mine passageway through borehole..... 13129	Nash, Harry P., Jr., relief..... 1905, 2170
Nahai, L., petroleum industry of Iran..... 7427	Nash, Philco, address, Feb. 12, 1964..... 10670
Natling dense hardwoods..... 18055	Nassau County, N.Y., northwestern, hydrogeology..... 6816
Naive, John J., food balances for 24 countries of Western Hemi- sphere, 1959-61..... 17907	Nasser, Gamal, Egyptian Socialism, fine distinctions from Alge- rian..... 2729
Nakada, M. P., synchrotron radiation calculations for artificial radi- ation belt..... 7512	Natality, see Birth.
Nakahara, Jun-ichi, optimal strate- gies and human behavior in fungus-eater game 4..... 11798	Natchez Trace Parkway: Emerald Mound..... 13300
Nakanishi, Shigeo, steady-state con- trol properties of electron- bombardment ion thrusters..... 7538	general information..... 14974
Nam, Charles B., socioeconomic char- acteristics of population, 1960..... 15315	Nathans, M. W., nuclear explosions, shock induced transitions, sam- ple history and recovery..... 120
Names (geographical), see Geograph- ical names.	National, see headings beginning National.
Nance, Earl C., soil survey, Wood- ward County, Okla..... 5693	National Advisory Council on Inter- national Monetary and Finan- cial Problems: increase in authorized capital of International Bank for Recon- struction and Development, special report..... 277
Nanes, Allan S., U.S. ideological ef- fort, Government agencies and programs..... 12132	increase in resources of Inter- American Development Bank, special reports..... 12020, 21163
Nannostomina, see Characidae.	report— Jan. 1-June 30, 1963..... 12027
Napadensky, H., dynamic response of snow to high rates of loading..... 12346	July 1-Dec. 31, 1963..... 17448
Naperville, Ill., population, special census..... 178	report on international financial in- stitutions, Apr. 1960-Mar. 1962..... 4432
Naphtenic acid, solvent extraction of rare-earth sulfates..... 9513	National Advisory Council of Nurse Training: establish— hearing..... 15816
Napoli, Concetta F. and children, relief..... 447, 1882	law..... 17439
Narcotic and Drug Abuse, President's Advisory Commission, see Presi- dent's Advisory Commission on Narcotic and Drug Abuse.	reports..... 13980, 17724
Narcotic habit, prevention and con- trol of narcotic addiction..... 20518	National Aeronautics and Space Ad- ministration: advanced research, key to future..... 16659
Narcotics: control act of 1956, effectiveness, investigation, reports..... 17836, 19585	appropriations, 1965— hearings..... 8397-8400, 8433, 10290, 10408
decisions..... 4094	index..... 10345
illicit traffic, and organized crime, hearings..... 533, 2239, 19600, 21239	law..... 15386
print additional copies, re- ports..... 325, 455	reports..... 8291, 12046, 12217, 13961
prescribing and dispensing under Harrison narcotic law..... 3001	arms control and disarmament, re- search and studies, report..... 11833
President's Advisory Commission— interim report..... 3087	contractor report CR (series)..... 1448, 5506, 7468-71, 9530-36, 11349- 356, 13139-154, 14767-792, 16652-656, 18717-723, 20519- 532, 21725-738.
report..... 5636	contractor reports, preparing— repro typing and layout..... 16665
traffic, 1963..... 16651	technical illustrating..... 16666
Yugoslavia, law on drugs..... 16079	educational opportunities for your professional growth and career advancement..... 3003
see also Morphine.	educational programs, hearings..... 4568
Narcotics Bureau, regulations..... 21724	EP series..... 9537, 14793, 16657-659, 21739.
Nardi, A. P., Colorado's forest area and timber volume..... 6745	excessive costs incurred in trans- porting Saturn launch vehicles, GAO report..... 8717
Nardone, John, plastic gears, memo- randum on feasibility for use in ammunition items..... 17897	excessive relocation payments to em- ployees transferred from one company location to another by Lockheed Missiles & Space Co., Sunnyvale, Calif., GAO report..... 12490
NAREC, see Electronic computers.	film list, 16mm, including film li- brary location map and service area..... 13264, 18799
Narragansett, R.I., Northeast Shell- fish Sanitation Research Cen- ter, research program..... 11565	Government information plans and policies, hearings..... 401
Narragansett Bay, physical oceanog- raphic studies, 1957 and 1958..... 2343	
NASA, see National Aeronautics and Space Administration.	
NASA EP series..... 7472, 9537, 14793, 16657-659, 21739	
NASA facts..... 1449, 7473, 16660-662, 20534-535	

# JANUARY-DECEMBER

	Entry
National Aeronautics and Space Administration—Continued	
human factors system program, bibliography	18729
industrial property control manual	7474
Jet Propulsion Laboratory, Pasadena, Calif., excessive costs incurred by leasing data processing machines, GAO review	10597
liquid-metals corrosion meeting	13155
manned space flight team	9537
NASA facts	1449
7473, 16660-662, 20534-535	
NASA installations, focus for achievement in space and aeronautics	7475
NASA photography from five years of space	7476
positions in aerospace technology, examination announcement	17130
press releases	3905
procurement—	
directive	16663
regulations	9538
semiannual report, July 1-Dec. 31, 1963	14927
publications—	
classification change notices	3761
educational publications, list	3002
11357, 20533	
manual	20541
scientific and technical publications and how to obtain them	18726
quality assurance provisions for Government agencies	14794
quality publication NPC 200 (series)	14794, 21740
reorganization briefing, hearing	414
report, semiannual—	
departmental edition	1481
document edition	284, 13926, 19446
research on materials applicable to supersonic transports	20566
satellite communication, military-civil roles and relationships	19510
scientific and technical reports for 1963, selected listing	11365
selling to NASA	11425
small business participation in Government procurement, 1963, conference	12283
SP series	1450-51
3004, 5501-3, 7477-79, 9539-41, 11358-365, 13155-159, 14795-799, 16664-668, 18727-729, 20536-541, 21741-744	
symposium on physics of solar flares	20537
tech briefs	7480-91
9542-63, 11367-377, 13160-210, 14800-832, 16669-676, 20542-565, 21745	
technical memorandums	5504-G, 7492, 9564, 14834, 20566
technical notes	1452-79
3005-34, 5507-22, 7493-7552, 9565-9612, 11378-417, 13211-246, 14835-899, 16677-721, 18730-791, 20567-617, 21746-776	
technical reports	1482-86, 5523-29, 7553-62, 9613-20, 11418-421, 13247-258, 14900-905, 16722-728, 18792-795, 20618-621, 21777
technical reprint NASA RP (series)	1487
technical translation	1480, 3035-40, 5530-34, 7563-68, 9621-27, 11422-424, 13259-263, 14906-926, 16726-733, 18796-798, 20622-630, 21778-780

	Entry
National Aeronautics and Space Administration—Continued	
technology utilization—	
program	1488
publications, list	14929
report	11364
telephone directory—	
Feb. 1964	7467
Aug. 1964	18724
weaknesses in management of Orbiting Solar Observatory project, GAO report	6762
National Aeronautics and Space Council, appropriations, 1965, hearings	10290
National Agricultural Advisory Commission, family farm in American agriculture, report	11754
National Agricultural Library: appropriations, 1965, Agriculture Dept., hearings	10286
Chinese agricultural publications from Republic of China since 1947, bibliography	9628
library list (series)	1489, 14930
3041, 9628	
National Air and Space Museum: naming and construction—	
hearing	15824
report	15692
renaming—	
hearing	15824
report	15692
National altitude rocket test facilities	14833
National apprenticeship program	5922
National Arboretum: general information	13595
research and education activities	9922
National archives, see Records.	
National Archives and Record Service:	
accessions	20632
preliminary inventories series	5538, 9629, 20633-635
publications, list	13265
special list	7573, 21781
National Arts Foundation:	
establish—	
hearings	2246, 13998
report	2215
National Assembly Standing Committee, North Vietnam, report	11077
National Association of Counties, Joint AASHO-NACO Committee 2d progress report	13429
National Association of Letter Carriers, AFL-CIO, agreement with Post Office Department	15025
National Association of Post Office and General Services, Maintenance Employees, agreement with Post Office Department	15025
National Association of Special Delivery Messengers, AFL-CIO, agreement with Post Office Department	15025
National atlas of United States (separate sheets)	1657, 7844, 21921
National Aviation Hall of Fame, see Aviation Hall of Fame.	
National banking review, journal of policy and practice	3762
National banks:	
annual meeting date, amend act—	
law	1961
reports	2040, 2042
authority to underwrite and deal in securities issued by State and local governments, hearings	6346
limitations on real estate loans, amend Federal reserve act, hearings	6346, 15802

# INDEX 1964

Entry	Entry
National banks—Continued	National Capital Transportation Agency:
loans on forest tracts, liberalize restrictions—	appropriations, 1965—
hearings ----- 6346, 12255	hearings ----- 6338, 8436
law ----- 13890	law ----- 13904
reports ----- 4466, 12226	reports ----- 8288, 8420, 13951
<i>see also</i> for individual banks, name of place where located or name of bank.	develop transit program for National Capital region, report... 2039
National Bison Range, mammals----- 699	National Center for Health Statistics:
National Boxing Commissioner, establish, hearings ----- 14150	career in statistics, general information ----- 7691
National Bureau of Standards:	organization and functions----- 5661, 18915
Analytical Chemistry Division, analysis and purification services ----- 11429	National Clearinghouse for Poison Control Centers, bulletins----- 3763
applied mathematics series ----- 13267	National Clearinghouse for Poison Health Information, bibliography on architecture of mental health facilities ----- 13416
calibration and test services ----- 1493	National Commission on Food Marketing:
circular ----- 9630	establish-----
crystal growth and characterization research ----- 9638, 21787	hearings ----- 10416, 13987
films, list ----- 7578	print additional copies, report... 15762
handbooks ----- 1491, 3043, 5544, 7574-75, 9632-33, 13268, 14932-933, 18803, 20637.	law ----- 13902
hygrometer, standard instrument... 11433	reports ----- 10272, 10406, 12063
journal of research... 3628-31, 13269-272	National Commission on Technology, Automation, and Economic Progress:
miscellaneous publications ----- 1492-94, 3044-45, 5545, 7576, 11431, 14934-935, 16737-738, 20638, 21782.	appropriations, 1965, supplemental proposal ----- 15415
monograph ----- 3046, 5546, 7577, 9634, 11432-433, 13273, 14936-938, 16739, 18804-805, 2069-640.	establish-----
new publications, TRA series ----- 3254	hearings ----- 13909, 15815
photometry of projectors ----- 3049	law ----- 17303
physical constants recommended by NAS-NRC, adopted by NBS ----- 5545	reports ----- 13985, 15725
postdoctoral associatehips in physical and mathematical science, opportunities ----- 1495	National Committee on Radiation Protection and Measurements:
publications-----	incorporate-----
newsletter ----- 11434	law ----- 15393
supplementary list, July 1, 1960-Dec. 31, 1963 ----- 9630	reports ----- 8302, 15675
Radiochemical Analysis Section, progress report, 1964 ----- 16741	National Conference on Institutionally Acquired Infections, proceedings ----- 20768
research highlights, 1963 ----- 7579	National Conference on Peaceful Uses of Space, proceedings ----- 20538
standard reference materials preparation, white cast iron spectrochemical standards ----- 14935	National Conference on Weights and Measures report, 1963 ----- 3045
technical news bulletin ----- 4078	National Council of Teachers of Mathematics, conference, Mar. 7-8, 1963 ----- 19630
technical notes ----- 1498-99, 3047-53, 5549-50, 7580-82, 9635-39, 11436-441, 13274-277, 14939-942, 16740-742, 18806-811, 20641-643, 21783-787.	National Council on the Arts:
National Cancer Institute:	establish-----
journal ----- 3627	hearings ----- 2246, 13998
monographs ----- 1502, 13284-85, 21792	law ----- 17437
research report ----- 11453	reports ----- 2215, 12095, 17544
National Capital, <i>see</i> Capital of United States.	National Crushed Stone Association, safety contest awards, 1962... 1397
National Capital Airports Bureau, annual report, 1963 ----- 13278	National Cultural Center:
National Capital Housing Authority: appropriations, 1965, hearings ----- 10290	footlight, monthly news letter... 3516
housing for the elderly recommendations, report ----- 7894	press releases ----- 3906
National Capital Open-Space Project: public open-space programs and activities ----- 7583	rename John F. Kennedy Center for Performing Arts-----
technical report ----- 7583	hearings ----- 4506
National Capital Planning Commission:	law ----- 6171
appropriations, 1964, supplemental proposal ----- 6213	reports ----- 2076, 2086, 2219, 4459
appropriations, 1965-----	National debt, <i>see</i> Public debt.
hearings ----- 6338, 8436	National defense:
law ----- 13904	agreement with-----
reports ----- 8288, 8420, 13951	Argentina ----- 15127
National Capital Regional Planning Council, annual report, 1963... 1500	Brazil ----- 9836
	Canada ----- 3159, 11632, 13480
	Congo (Leopoldville) ----- 9832
	Dominican Republic ----- 15125
	Paraguay ----- 9834
	United Kingdom of Great Britain and Northern Ireland ----- 21882
	code of Federal regulations ----- 4712, 6655, 6670-75, 8575
	continental radar defense system, agreement with Canada ----- 15123

# JANUARY-DECEMBER

	Entry		Entry
try	National defense—Continued	National defense—Continued	
	education act of 1958—	veterinary services in national	
	amend, hearings-----	emergencies-----	1696
436	counseling and guidance training	wage and salary stabilization pro-	
904	institutes program—	grams in post-attack emer-	
951	announcement-----	gency-----	12331
	policies and procedures man-	see also Civilian defense—National	
039	ual-----	security.	
	extend and amend law—	National Democratization Movement	
	hearings-----	Liaison Council, Japan, activi-	
	law-----	ties-----	16070
991	reports-- 15530, 15732, 17575,	National Economic Conversion Com-	
915	19483	mission, establish, hearings-----	19596
	Federal grants, inadequacies in	National economy, see Economic con-	
	administration, GAO report-----	ditions.	
763	financial assistance for science,	National electric rate book-----	664-672,
	etc., instruction, guidelines-----	2322-24, 3764, 4703-9, 10524-	
	graduate fellowship program-----	527, 12394-395, 14246-251,	
		15894-899, 17980-93, 19691-	
416	guidance, counseling, and testing,	701, 21305-309.	
	progress, 1958-63, report-----	National emergency disputes under	
	institutes authorized by Oct.	labor-management relations	
	1964 amendments, preparing	(Taft-Hartley) act-----	2949
987	proposals, manual-----	National Farm Safety Week, July 19-	
762	language development program,	25, 1964-----	9956
902	research completed, etc.,	National Farmers Week, designate,	
063	list-----	report-----	506
	language institute program—	National Federation of Post Office	
	manual-----	Motor Vehicle Employees,	
	1964-65-----	AFL-CIO, agreement with	
415	language laboratory facilities,	Post Office Department-----	15025
	technical guide, erratum-----	National Fire Prevention Week, Oct.	
815	modern foreign language fellow-	4-10, 1964-----	16963
303	ship program, 1965-66-----	National Fisheries Center and Aquar-	
725	NDEA and higher education	ium, preview-----	696
	(periodical)-----	National Forest Reservation Commis-	
	NDEA language and area cen-	sion, report, 1963-----	2134
	ters-----	National forestry research program-----	11774
	1st 5 years, report-----	National forests:	
393	program in non-western lan-	administration, intermountain re-	
675	guages-----	gion-----	14297
	new educational media—	America's playgrounds, skiing-----	39
	projects initiated under title 7.	areas-----	
078	programs, news and reports-----	June 30, 1963-----	770, 21325
	projects, Sept. 2, 1958-Apr. 30,	June 30, 1964-----	21325
538	1964-----	relationship between visitor	
9045	student loan program, increase	characteristics and recreation	
	authorization, etc.,-----	activities-----	785
	hearings-----	campgrounds-----	
	report-----	central Rocky Mountains, sum-	
	title 3, questions and answers-----	mer recreational use-----	12480
9630	emergency preparedness, national	estimating number of visitors-----	12470
	plan, basic principles, and in-	code of Federal regulations-----	6678
	index of authorities-----	grant easements, construct and	
9908	employment impact of changing de-	maintain roads and trails-----	
7437	fense programs-----	law-----	21149
7544	guarding United States and out-	reports-----	14103, 19487
	posts, United States Army in	Illinois, amount of money available	
1397	World War II-----	to State, hearings-----	6336
	horological industry, importance,	laws relating to establishment and	
	hearing-----	administration-----	13578
3516	military facilities, joint declaration	legislation, miscellaneous, hear-	
3906	concerning renewal of agree-	ings-----	19496
	ment with Spain-----	log scaling handbook-----	14302
	military posture, hearings-----	national forests and community, re-	
	military procurement and supply,	view 1962-----	10587
4506	economic aspects, 1964-----	Pacific Northwest—	
6171	mobilization, report-----	lands of many uses, general in-	
4459	national defense and Army wel-	formation-----	2370
	fare, Bulgaria-----	Region, management objectives	
	policies in 1963, compilation-----	and policies for high mountain	
	print as House document, re-	areas-----	2358
	ports-----	range survey story and planning	
5127	preparedness program, investiga-	for management-----	13596
9836	tion report of subcommittee-----	recreation in—	
3480	procurement, trends, 1958-62-----	Idaho-----	12437
9832	publications, price list-----	Nevada-----	12438
5125	strategy, military security, and	Utah-----	12439
9834	arms control in thermonuclear	Wyoming-----	12440
	world-----	rules and regulations for protec-	
1882	strengthen, Communist China stud-	tion, etc., enforcement in petty	
4712,	ies-----	offense cases, provide—	
8575	transportation, strengthen and im-	law-----	17396
	prove (remarks)-----	reports-----	10249, 17765
5123	United States policies from World		
	War II through 1963, index-----		



# INDEX 1964

	Entry		Entry
National forests—Continued		National Institute of Dental Research:	
self-guiding trail, developing	19092	addresses presented at 15th anniversary observance	5556
trees of forest, their beauty and use	7938	opportunities in dental research	9644
see also Wilderness areas—also names of forests.		National Institute of Mental Health:	
National Front for Liberation of South Vietnam, 2d Congress, military report	9245	mental health project grants program	15167
National Gallery of Art:		professional status of personnel supported by training grants	1501
color slides and filmstrips for loan	9640	training grant program, 1962, statistical sourcebook	1503
general information	5551	National Institute of Neurological Diseases and Blindness, progress, summary	7590
traveling exhibits of framed reproductions from National Gallery of Art	7584	National Institutes of Health:	
National Guard:		appropriations, 1965, hearings	8360
air reservist (periodical)	3235	international biomedical research symposium, Oct. 31–Nov. 2, 1963, Bethesda, Md., proceedings	18815
Army—		library translations index, 1954–63	16745
equipment, controlled cannibalization	11443	mental health monograph	16744
field training, administrative instructions	7585, 11442, 13279	NIH Library, periodicals currently received, 1964	13288
installations and facilities, operating procedures	9642	normal volunteer program	1504
register, 1964	14945	opportunities for clinical and professional education	7587
attending or instructing at National Guard schools, clarify status—		organizational directory and bibliography	9721
hearing	19591	programs, work, etc.	5357
law	19429	research for health at NIH, report	16751
reports	827, 19564	research, grants and awards, 1963, index	11451–452
enlisted members, cancellation of indebtedness, authorize, report	13941	research profile	7590, 18816
Federal property, supply management report instructions	14944	resources analysis memo	20651
reemployment rights, briefing sessions and program	20994	scientific information activities	7622
see also Pay, allowances, etc.		see also Child Research Center, National Institutes of Health.	
National Guard Association of United States, trophy, announcement of winners, pamphlet	21788	National labor relations act, see Industrial relations.	
National Guard Bureau:		National Labor Relations Board:	
pamphlets	7585, 9641–42, 11442–443, 13279, 14943–944, 18812, 20644–645, 21788–789.	appropriations, 1965—	
publications, index	14943	hearings	8361, 17864
trophies—		law	19413
Eisenhower trophy to outstanding unit of company size, announcement of winners, pamphlet	20645	report	8343, 17623, 17778
indoor rifle matches, postal, announcement of winners, pamphlet	18812, 21789	arbitration and N.L.R.B., happy marriage? (speech)	13290
National Guard Association, Pershing trophy, National Guard (State) trophy, announcement of winners, pamphlet	21788	consequences of NLRB action on good faith bargaining (speech)	13291
National health survey.		decision and orders	1507, 7592, 13292, 18817, 21795
health survey procedure, concepts, questionnaire development, and definitions in health interview survey	11582	decisions, digest	14959, 16753
vital and health statistics	5666, 7704–6, 9732–34, 11582–585, 13423–424, 15071, 16846, 18924–926, 20771.	election reports	3759
National Heart Institute, research grants on drugs and heart disease, 1949–62, review	11445, 16743	evaluation of import and effectiveness of remedial processes (address)	13293
National Herbarium, contributions from	1512, 5563, 16759, 18819	hospitable reception for arbitration at Labor Board (address)	14960
National housing act, see Housing.		labor management relations examiner, examination announcement	17144
National Human and Resource Conservation Council, establish, hearing	19604	lawyer, random thoughts (address)	9648
National Institute of Child Health and Human Development, research and training programs	5559	policy, procedures employed in determining (speech)	16754
		recent developments affecting arbitration and NLRB (speech)	11455
		releases	3907
		report, 1963	9647
		statistical summary, quarterly	3760
		weekly summary of cases	4151
		what's right with Labor Board (address)	1508
		National League for Nursing, nursing education facilities, report	16839

# JANUARY-DECEMBER

Entry	Entry	Entry
	<b>National Library of Medicine:</b>	
	bibliography—	
	medical reviews—	13294
5536	medical translations—	18917
9644	1959-62, subject index—	18755
	July-Dec. 1962—	18818
	Jan.-June 1963—	13092
15167	catalog—	11457
	classification—	16757
1501	organization and functions—	16756
	services, etc.—	
1503	National Mastitis Council, Inc., recommendations on mastitis screening procedures—	5657
	<b>National Mediation Board:</b>	
7590	appropriations, 1965—	
	hearings—	8361, 17864
8360	law—	19413
	reports—	8343, 17778
	members, terms of office—	
	law—	17401
18815	reports—	2062, 17732
	report, 1963—	5562
16745	National Memorial Cemetery of Pacific, Honolulu Memorial—	19195
16744	National Meteorological Center:	
	general information—	7843
13288	technical memorandum—	11691
1504	National monuments and memorials, code of Federal regulations—	6678
7587	see also names of monuments or memorials.	
9721	National Museum:	
5557	bulletins—	1509-11, 3059, 13295, 14961-962, 16758, 20653-654, 21796-801.
16751	proceedings—	7597-7609, 9650-52, 18820-823, 20655-659, 21802-803.
51-452	report, 1963—	
7590,	departmental edition—	5564
18816,	document edition—	4431
20651	National Oceanographic Data Center:	
7622	announcement—	14990
	fully processed oceanographic cruises, list—	14991
	introduction—	9670
	newsletter—	7626
	publications—	
	catalog series—	21811
	general series—	9670-72
	National oceanographic program—	8536, 8539
	<b>National Park Service:</b>	
13290	appropriations, 1965—	
	hearings—	15792
13291	reports—	6303, 15707, 17514
1507,	archeological research series—	20660
21795	areas administered by—	
16753	establish concession policies—	
3759	hearings—	12139
	report—	12060
	general information—	16760
	business benefits—	13299
13293	career employment—	5566
	laws relating to, 1944-63—	5568
14960	policies, review, hearings—	6362
	press releases—	3908
	revenues due Govt. illegally expended for rehabilitation, etc., of concession facilities, GAO report—	21340
17144	seasonal employment—	3065
9648	National parks:	
16754	and related areas, public use, statistical report—	3949
11455	boating regulations in national park system—	20661
3907	code of Federal regulations—	6678
9647	concession policies, establish—	
3760	hearings—	12139
4151	report—	12060
1508	United States Travel Service information folder—	20867
16839		
	<b>National parks—Continued</b>	
	wildlife management—	12541
	see also names of parks.	
	National Parks, World Conference on, see World Conference on National Parks.	
	National plan for emergency preparedness—	12330
	National Poetry Festival, Library of Congress, Oct. 22-24, 1962, proceedings—	13093
	National poultry improvement plan, see Poultry.	
	National Public Advisory Committee on Area Redevelopment, interim report—	15369
	National Railroad Adjustment Board: appropriations, 1965, hearings—	8361
	awards—	1514, 7615-17, 9663, 11473-474, 15982-986, 20666, 21809-810.
	report, 1963—	5562
	National Railway Labor Conference, emergency board report—	19644
	National Reactor Testing Station, subsurface geology—	12503
	National Referral Center for Science and Technology—	13094
	National Register of Scientific and Technical Personnel, American science manpower, 1962—	20667
	National Rifle Association, indoor rifle tournament, announcement of winners, NGB pamphlet—	20644
	National Rural Letter Carriers Association agreement with Post Office Department—	15025
	National Science Foundation:	
	appropriations, 1965, hearings—	10290
	international science notes—	5572
	press releases—	3909
	programs for education in sciences, schedule—	3068
	publications—	3067
	report, 1963—	
	departmental edition—	7619
	document edition—	6201
	research and development, reviews of data—	9664
	science course improvement projects series—	7620, 20668
	National search and rescue manual, amendment—	222
	National securities exchanges, credit by brokers, dealers, and members, regulation, supplement—	682
	National security:	
	administration—	
	report, 1963—	
	hearings—	531, 6508, 8444, 10420, 15807
	print additional copies, report—	17816
	role of American Ambassador, study—	14138
	Secretary of State, study—	6509
	selected papers, print additional copies, report—	8427
	air traffic control, FAA regulations, amdt—	17968
	aircraft titles and security documents, recording, Federal aviation regulations—	17966
	economics, correspondence course offered by Industrial College of Armed Forces—	12574
	establish legislative base for personnel security procedures in National Security Agency—	
	law—	8229
	report—	6477
	Government operations, investigation, authorization, report—	6447

# INDEX 1964

Entry	Entry
National security—Continued	National water quality network, annual compilation of data..... 5659
internal security laws, etc., administration, investigation, expenses, reports ..... 4558, 17813	National Wilderness Preservation System:
maritime resources for security and trade ..... 10333	establish—
personnel procedures for ACDA contractor employees, law ..... 266	hearings ..... 8386, 12138
relationship between Teamsters Union and Mine, Mill & Smelter Workers, threat to national security—	law ..... 17435
hearings ..... 15811, 17883	reports ..... 13970, 15500, 17603
report ..... 17883	National Zoological Park:
safeguarding classified information, industrial security manual ..... 10446	appropriations, 1965—
State Department security—	hearings ..... 15792
administration, investigation, testimony, letters, etc. .... 541	reports ..... 6303, 15707, 17514
hearings ..... 2244	police, salaries, amend act, hearing ..... 12282
United States personnel security practices, appendix departmental and agency rules and regulations, hearings ..... 12277	Nationality:
see also National defense.	China, minority nationalities ..... 20392
National Security Agency:	code of Federal regulations ..... 8566
establish legislative base for personnel security procedures—	immigration and nationality act—
law ..... 8229	amend, hearings ..... 17659, 19517, 21209
report ..... 6477	print additional copies, report ..... 19478
National Security Seminars:	judicial decisions ..... 2115
information guide for conduct of ..... 12576	with amendments, text ..... 15595
presentation outlines and reading lists ..... 881-882, 15995	laws, administrative decisions, notice ..... 8792
prospectus, 1964-65 ..... 12577	Nationality solidarity (Chinese periodical):
National service life insurance, see Life Insurance.	translations ..... 21546
National Severe Storms Project:	Nations, see Foreign countries.
field operations—	Nation's manpower revolution, hearings ..... 543, 2247, 4589, 15815
and data collection, spring 1961, summary ..... 11696	NATO, see North Atlantic Treaty Organization.
spring 1962 ..... 11704	Natural gas, see Gas.
spring 1963 ..... 11709	Natural resources:
objectives and basic design ..... 11692	Arizona ..... 842
operations, 1962, analysis of selected aircraft data ..... 11706	Colorado ..... 2441
report (series) ..... 11692-709, 20879	conservation—
small-scale surface network data, analysis methods ..... 11707	information series ..... 1591
surface network, index ..... 11697	race for inner space, special report to the nation ..... 8796
National Shipping Authority, current regulations, index ..... 13096	something about conservation ..... 10681
National Society of Daughters of American Revolution:	teaching aid, in our forests are many mansions ..... 2356
report, annual ..... 419, 15607	conserving our national resources, 4-H leader's guide ..... 11778
print as Senate document, report ..... 8432	forest resources, eastern Oregon ..... 8696
National songs, Star-spangled banner, national anthem of U.S. .... 7610	human and natural resources of Nation, conserve, hearing ..... 19604
National survey of historic sites and buildings ..... 14975	Land Management Bureau careers in resource management, forestry, administration, minerals, etc. .... 18649
National System of Interstate and Defense Highways:	Massachusetts ..... 6834
study future needs—	Montana ..... 8795
hearing ..... 6369	Nevada ..... 21370
report ..... 2088	New Mexico ..... 19811
National Teachers' Day, designate 2d Monday in April, report ..... 14083	Northern Great Lakes region ..... 15221
National Tropical Botanical Garden, see Pacific Tropical Botanical Garden.	Ohio ..... 2442
National Trust for Historic Preservation in United States:	Oregon ..... 15973
Woodrow Wilson House, exempt from D.C. tax—	resource bulletins ..... 8695-8700, 12482, 21329
law ..... 17329	timber, outlook (remarks) ..... 10588
reports ..... 17507, 17709	TVA, fish and wildlife ..... 5720
National turkey improvement plan, see Turkeys.	Washington State ..... 2443
National Union Catalog, Library of Congress ..... 3768	West Virginia ..... 14365
National Warning System, see Warning systems.	Natural science, see Science.
	Naturalization:
	becoming a citizen series ..... 12535
	teacher's guide ..... 12536
	candidates, our Constitution and Government, Federal textbook on citizenship ..... 18158, 19810
	investigation—
	authorization, report ..... 4557, 6483
	expenses, report ..... 17811
	proceedings, directory of courts having jurisdiction ..... 8793
	publications, price list ..... 18888
	see also Citizenship—Nationality.
	Nature (USSR periodical):
	translations ..... 21478
	Nature of liquid film evaporation during nucleate boiling ..... 21750

# JANUARY-DECEMBER

	Entry
Nauchno-tehnicheskaya informatsiya (periodical):	2915
translation	16184
Nauka i zhizn (periodical):	16184
translations	21746
Naumann, Eugene C.: load randomization, etc., influence on fatigue life	18792
Naumann, Robert J.: directional dependence of counting rates from Explorer IV	16723
observed torque-producing forces acting on satellites	18835
Nautical almanacs: American ephemeris and nautical almanac, 1966	7625
1965	10146
Nautical charts, see Maps and charts.	495
Navajo Indians: Alamo Band of Puertocito Indians, lands in trust—	8338
law	834
reports	262
general information	21355
oil and gas leases, approve agreement, law	20763
Navajo Lake, hydrology and hydrogeology	18087
Navajo Reservation: medical practice	20698
road construction program, Arizona and New Mexico, deficiencies in administration, GAO review	4571
Naval Academy, Annapolis: admissions, regulations	6187
appointment law, revise—	4567
hearing	13307
law	9666
report	15521
catalog, 1964-65	7659
register, 1963-64	18091
Thailand citizens, instruction, report	18091
Naval Air Development Center, Johnsville, Pa., Aeronautical Electronic and Electrical Laboratory, report	17639
Naval Air Station, Barber's Point, un-economical practices in management, etc., of quarters, GAO review	17641
Naval Air Station, Norfolk: flight hazard removal, authorize—	21129
hearings	17848
law	17599
reports	13868
Naval Air Station, Pensacola: golden anniversary, galvano in commemoration—	10268
law	5204
report	3773
Naval architecture, see Shipbuilding.	2481
Naval art and science: hydroacoustical means of surveillance, prospects for increasing range, USSR study—	3772
naval research logistics quarterly	20707
radio intercept at sea and counter-measures, USSR study	20678-679
Naval aviation news	18849
Naval education: anti-air warfare training program, procedures, etc.	16792-793
basic electronics, trainee's guide for fire control technician training	13320
communications yeomen, class A, trainees guide	3080
guided missiles school—	
mechanics of motion, manual	
special technology course, training manual and textbook	
instructor training	

	Entry
Naval education—Continued	
naval training bulletin	3777
Navy instructors' manual	11484
Navy training courses	1525-26, 5580-81, 5583-85, 7637, 7641, 7643-44, 9679-80, 11452, 11487, 13314-316, 14997-999, 16785-788, 16796, 20680, 20684, 20695, 20697, 20699, 21822-824.
training facilities, Navy design manual, changes	3200
training program	20682
training publications for advancement in rating, bibliography—	11488
Naval history, Civil War naval chronology, pt. 4, 1864	14996
Naval hospitals: Portsmouth, Va., lands, legislative jurisdiction—	
hearing	10296
law	17244
reports	10270, 14116
Naval installations, see Installations (military).	
Naval Medical Research Laboratory: reports	5462-69
research summaries reported on during—	
1960	2980
1962	11311
1963	14728
Naval Observatory, publications (series)	9668-69
Naval Oceanographic Office: chart correction lists	1524, 11480, 21819
publications, fees for sale, increase	17295
law	10251, 15729
reports	1519-23, 3071-75, 5574-79, 7627-36, 9673-77, 11476-479, 13309-313, 14992-995, 16774-782, 18836-845, 20669-677, 21812-818.
report, fiscal year, 1963	13308
Naval officers, see Navy.	
Naval Ordnance Laboratory, White Oak, Md., technical reports—	5620, 13349
Naval Ordnance Test Station, China Lake, Calif.: land conveyance to Kern County, Calif.—	
law	17359
report	364, 15727
Naval Personnel Bureau: career publication	3249
training manuals and correspondence courses, lists—	7640, 20694
Naval petroleum reserves: no. 3 and adjacent areas, exploration (series)	804
no. 4 and adjacent areas, exploration (series)	10635-636, 19781-782
no. 4, Umiat field, Alaska, sell crude oil for drilling, mechanical, and heating operations in nearby areas—	
hearings	12121
law	17248
reports	13933, 15678
Naval Radio Research Station, Sugar Grove, unnecessary costs incurred for project, Navy Dept., GAO report	10619
Naval Research Laboratory: annual report, 1963	16799
progress report, monthly	3969
report series	5587-5616, 7649-53, 9682, 11495, 13324-346, 15007, 16800, 18857-866, 20708-712.
space surveillance system observations, decay prediction of 1963-21	20712
Naval research logistics quarterly	3773



# INDEX 1964

Entry	Entry
Naval Research Office :	Navigation—Continued
ACR series-----	radio aids-----
general information-----	Atlantic and Mediterranean
scientific information activities-----	area----- 5579, 14993, 20675
technical report-----	Pacific and Indian Oceans area-----
technical report RLT series-----	14994, 20676
Naval research reviews-----	rules, provide exceptions, hearing-----
Naval Reserve :	theory, problems, USSR study-----
ensign medical program-----	treaty with Belgium-----
forces, unnecessary costs incurred	see also Air navigation.
in enlistment and discharge of	Navigation locks, see Locks (hydrau-
unqualified applicants, GAO	lic engineering).
report-----	Navigation locks, examination
officers, register-----	announcement----- 15351, 21051
service erroneously credited in com-	Navigator (periodical)-----
putation of basic pay, relief	NAVTRADEVICEN, see Naval Train-
of naval officers-----	ing Device Center, Port Wash-
law-----	ington.
report-----	NAVWEPS report----- 15008
Naval Reserve Officers Training Corps,	Navy :
aviation and amphibious cruise	air stations, pavement evaluation
manual-----	data----- 7874
Naval reservist (periodical)-----	career Navymen, rights and bene-
Naval service, see Navy.	fits, information----- 13319
Naval ships, see Ships.	career, occupational handbook,
Naval space surveillance system,	manual for civilian guidance
broadband linear array-----	counselors, etc----- 7645
Naval stores :	civil engineer (periodical)-----
report-----	contract clause book, firm fixed-
annual----- 11651	price supply contracts----- 13489
monthly----- 3776	electron tube circuits, equipment
Naval supplies, see Military supplies.	handbook----- 9683
Naval training, see Naval education.	enlisted classification procedures,
Naval Training Device Center, Port	manual----- 20696
Washington :	enlisted personnel, classification
publications, index----- 20700	manual----- 7642, 16791
technical reports-----	ensign medical program----- 20461
5586, 7646-78, 11489-494,	fleet ballistic missile, human factors
13322-323, 15002-6, 16797,	design standards for-----
18852-856, 20701-707, 21825-	equipment----- 5619
828.	systems----- 5618
training device guide----- 7656, 13348,	fleet motion picture service man-
20713	ual----- 15000
Naval vessels, see Shipbuilding—	glass fiber surface treatments, re-
Ships—Submarine boats-----	search----- 13349
Warships.	leadership-----
Naval Weapons Bureau :	manual----- 9681
directory----- 3289	principles and problems----- 16795
employment opportunities-----	leasing of naval properties in Vir-
NAVWEPS report----- 15008	gin Islands, status, hearings-----
ordnance pamphlet OP series-----	management review----- 3780
7657-58, 13350	medicine, statistics, trends and
reliability engineering, film bro-	facts----- 4055
chure----- 18867	messes ashore, manual, change-----
scientific information activities-----	new 4-ocean challenge----- 15015
7623	officers-----
Standards Laboratory Instrument	careers handbook----- 16794
calibration technique----- 13351-354	classifications, manual----- 3081
Navarro-Paz, Francisco, relief-----	cross-reference index----- 11481
17481, 19376	erroneous compensation based
Navigation :	upon incorrect computation
aids-----	of service for basic pay,
Coast Guard lists-----	relief-----
Great Lakes----- 8172	law----- 19422
Pacific Coast and Pacific Is-	report----- 19561
lands----- 19344	promotions, improved opportu-
Navy design manual, changes-----	nity, extend-----
aids to navigation manual----- 17152-153,	hearings----- 8367, 15790
19343	law----- 17252
establishment of long range aid to	reports----- 10246, 12103, 14118
navigation (Loran-C) station	register-----
in Newfoundland, agreement-----	departmental edition----- 11486
21888	document edition----- 10180
laws, documentation of vessel	relief----- 242
Eugenie II with coastwise	Philippine nationals enlistment, in-
privileges, report----- 2204	quiry----- 2115
maneuvering board manual-----	revisions----- 3781
9677	procurement directives----- 13368
navigable waters, code of Federal	procurement information, index-----
regulations----- 6676	publications, price list----- 7685
notice to mariners----- 3800	Regular, unnecessary costs incurred
Great Lakes, etc----- 3801	in enlistment and discharge of
index 1-26, 1963----- 1524	unqualified applicants, GAO re-
index 27-52, 1963----- 11480	port----- 6787
index 1-26, 1964----- 21819	research, 40 years, 1923-1963----- 16799
Panama Canal and adjacent waters,	
rules and regulations----- 6026	

# JANUARY-DECEMBER

	Entry
Navy—Continued	
scientific information activities..	1516-17, 7623
shipbuilding and conversion program, 1965.....	16783
ship's serviceman 1 and C, training course.....	11487
Soviet, military translations.....	9251
submarine in United States Navy, training publications for advancement in rating, bibliography.....	18846
unnecessary costs as result of refusal to accept standardized officers' dress shoes, GAO report.....	11488
vigorous voluntary sports program for ship and station, guide.....	2407
see also Retired officers, etc.—Warships.	16790
Navy Department:	
additional costs incurred in procurement of P6M seaplanes, GAO report.....	8705
appropriations, 1964—deficiency, hearings.....	10285
military construction, hearings.....	517
appropriations, 1965, military construction, hearings.....	10291, 12118
Assistant Secretary, nomination of Robert W. Morse, hearing.....	14127
automatic data processing systems, ineffective use at Philadelphia Naval Shipyard, GAO review.....	18090
Barber's Point, Naval Air Station, uneconomical practices, GAO review.....	18091
chief of naval operations, nomination of David L. McDonald, hearings.....	521
diving manual, errata.....	1578
Electronics Supply Office, automatic data processing case history.....	15294
employees assigned to California offshore islands, travel expenses—	
hearing.....	17649
law.....	17397
reports.....	15528, 17747
enlisted personnel, classification procedures, manual.....	20696
erroneous purchase of technical data package from Westinghouse Electric Corporation, GAO report.....	4756
excessive prices paid for propulsion reduction gears purchased from Westinghouse Electric Corp., Sunnyvale, Calif., GAO report.....	4759
follow-up review of failure to use excess spare parts and assemblies in aircraft production, GAO report.....	8722
forms management guide.....	5624
improper charges to Government cost-type and incentive-type contracts held by Grumman Aircraft Corp., GAO report.....	10601
improper or unnecessary payments of pay, travel, and other allowances to crew members of U.S.S. <i>Kitty Hawk</i> , GAO report.....	10602
industrial relations, principles, etc.	20693
Navy contract clause book, firm fixed-price supply contracts.....	13489
overpayments made for nuclear submarine components under cost-plus-a-fixed-fee contract from Combustion Engineering, Inc., GAO report.....	6774
overpricing by Bethlehem Steel Company for nuclear frigate U.S.S. <i>Bainbridge</i> , GAO report.....	8731

	Entry
Navy Department—Continued	
overpricing of nuclear reactors components under Westinghouse cost-plus-a-fixed-fee contracts, GAO report.....	6776
overpricing of nuclear submarine components under Westinghouse subcontracts, GAO report.....	6777
overpricing of ship propulsion boilers purchased under contract with Foster Wheeler Corporation, GAO report.....	6778
overpricing of steam generators for nuclear aircraft carrier, GAO report.....	6779
overprocurement of spare fuse components used for repair of improved Tartar and Homing Terrier missiles, GAO report.....	6780
presentations.....	5626
procurement—	
small business participation in Government procurement, 1963, conference.....	12283
transmitter, militarily designed, when commercially designed equivalent was available at less cost, GAO report.....	12493
refunds of group insurance premiums by Grumman Aircraft Engineering Corporation, GAO report.....	4762
report, 1963.....	17896
Secretary, nomination of Paul H. Nitze, hearing.....	522
uneconomical practices in management of mobilization, reserve stocks of construction equipment, etc., GAO report.....	8734
unnecessary costs incurred for Naval Radio Research Station project at Sugar Grove, W. Va., GAO report.....	10619
unnecessary costs incurred in procurement of defective torpedo tubes from Youngstown Welding & Engineering Co., GAO report.....	19765
unnecessary costs incurred in purchase of automatic flight control systems for A-4 series aircraft, GAO report.....	19766
unnecessary per diem payments—military personnel reporting early for temporary duty assignments, GAO report.....	8741
personnel during construction of nuclear-powered submarines, GAO report.....	8742
unwarranted allowance for material price increases to Newport News Shipbuilding and Dry Dock Company for construction of U.S.S. <i>Enterprise</i> , GAO report.....	21344
use of polygraphs, hearing.....	10315
Western Pacific supply depots, unnecessary retention of spare parts, GAO report.....	10624
Navy Nurse Corps, see Nurse Corps Navy.	
Navy ROTC, see Reserve Officers' Training Corps, Navy.	
Navy training courses, see Naval education.	
NAWAS, see Warning systems.	
NBL, see New Brunswick Laboratory.	
NBS, see National Bureau of Standards.	
NDEA and higher education (periodical).....	3782
Neace, Myron B., manufacturers' agent, bibliography.....	20789

# INDEX 1964

Entry	Entry
Neal, Luther, jr., control-surface interaction effects on delta-wing windward pressures.....	14867
Nealon, Robert J., wool broad woven goods, summary for 1963.....	17103
Near East, <i>see</i> East (Near East).	
Nebraska:	
annual survey of manufacturers, 1962, standard metropolitan statistical areas, and large industrial counties, statistics.....	6028
climatological data.....	3329
eastern, sediment discharge during floods.....	18121
electric rate book.....	19696
ground water resources of Mirage Flats project.....	21362
labor organizations, reporting, register.....	16573
Loup Rivers, channel patterns and terraces.....	12510
mineral industry, minerals year-book chapter.....	1419
Mississippi River and tributaries, fishery products, wholesale dealers, list.....	18025
municipal waste facilities, 1962 inventory.....	3106
municipal water facilities.....	18911
precipitation data, hourly.....	3578
public school finance program, 1962-63.....	17922
weather stations, decadal census-windbreaks, Austrian pine, height-age curves.....	783
women, legal status.....	20883
Nebraska mid-State unit, <i>see</i> Missouri River Basin project.	
Nectarines:	
production, use, value, by States, 1962-63.....	15129
reduction of postharvest decay with heat treatments.....	13586
Nectria canker, hardwoods.....	18044
Needles (hypodermic), <i>see</i> Hypodermic needles.	
Neef, Arthur:	
labor in Mexico.....	1372
labor law and practice in Mexico.....	5431
Neel, E. A., high density graphite recrystallized by hot forming.....	13652
Neel, George I., calculation of percentage points of F distribution.....	19161
Neff, W. J., launch environment profiles for sounding rockets and spacecraft.....	5508
Negotiated contracts, <i>see</i> Government contracts—names of departments, etc., issuing contracts.	
Negroes:	
aging nonwhite and his housing, analysis of 1960 census data.....	4827
American, assimilation into labor movement through efforts of A. Philip Randolph (remarks).....	13380
apprenticeship reports by State advisory committees.....	6076
banking and community development (address).....	21064
business opportunities (remarks).....	8184
census of population, 1960, subject guide.....	8107
challenge of equal employment opportunities (address).....	224
citizenship in emerging culture, privileges and responsibilities (address).....	15366
economic trends in Negro market (remarks).....	10128
employment (address).....	7352
future role in business (remarks).....	226
Negroes—Continued	
geographic mobility, comparison with white.....	17024
our nonwhite population and its housing, changes between 1950 and 1960.....	832
progress toward equal opportunity (remarks).....	228
rights and opportunities under Labor Department programs (remarks).....	16575
servicemen and family housing.....	10099
women, problems.....	1542
women workers in 1960.....	11722
Nehalem Indians:	
disposition of funds—	
law.....	17365
reports.....	12110, 15717
Neighborhood Youth Corps:	
and business leadership.....	21658
and your union.....	21659
are you out of school, etc., want to get in job, etc., build a better future in Neighborhood Youth Corps.....	21654
facts.....	21660
general information.....	21657
in your community.....	21661
what is it?.....	21663
your future and Neighborhood Youth Corps.....	21664
Neighborhoods, urban renewal rehabilitation, minimum property standards.....	4699
NeJame, George E., relief.....	2160, 11987
NELIAC—N, tutorial report.....	5610A
Neimes, Edwin V., phenomenon of aircraft aquaplaning.....	202
Nelson, Kenneth G., highlights from survey of residence and migration of college students, fall 1963.....	10465
Nelson, L. C., Jr., automatic fuel element enrichment differentiator (FEED) based on gamma-ray spectrometry.....	5969
Nelson, Morlan W., water supply outlook and Federal-State-private cooperative snow surveys for Idaho.....	4139
Nelson County, Va.:	
nelsonite deposits.....	11335
titanium resources.....	11335
Nelsonite, deposits, Nelson and Amherst Counties, Va.....	11335
Nematodes, <i>see</i> Nematoid worms.	
Nematoid worms:	
Ascaridia galli, antigen, immunization of chicks, effect of vitamin A on antibody formation, USSR study.....	8024
nematology literature list, 1962.....	17
Neocoelidiinae, <i>see</i> Leafhoppers.	
Neofitou, Michael J., relief.....	1905, 2170
Neogastropoda, <i>see</i> Gastropods.	
Neon, solubility determination in water and extracted human fat.....	13650
Neoplasms, <i>see</i> Tumors.	
Neopositivism, <i>see</i> Logical positivism.	
Neotropical microlepidoptera.....	9650, 18822, 21802-803
Nepal, labor conditions.....	11295
Nepal alder, <i>see</i> Alder.	
Nepheline syenite, minerals year-book chapter.....	18664
Nephelines, rocks containing, piezo-electric effect, USSR study.....	14467
Nephritis, glomerulo-, bibliography.....	1564
<i>see also</i> Glomerulonephritis.	
Neri, Milagros A., relief.....	12201

# JANUARY-DECEMBER

	Entry		Entry
		<b>Nerves:</b>	
		action potentials of vestibular neu-	
024	18199	rons in cats, USSR study.....	
		brain, central neurons, mathemati-	
832	10881	cal methods for investigation	
		of impulse activity, USSR bi-	
228	11227	ophysical study.....	
		cells, nuclear membrane potential,	
		USSR study.....	
6575	5004	cortical neurons, possibility of di-	
0099	4250	vision, USSR study.....	
1542		efferent labyrinthine impulses in	
1722		frog.....	
		extermal, influence of gravita-	
		tional overloads of arterial	
		system, USSR study.....	
7365	14616	neurons, rhythm variations of retic-	
5717		ular formation during lateral	
		overloads.....	
1658	18797	peripheral, occupational diseases	
21659	1039	of, USSR study.....	
		Ranvier nerve fiber nodes, action	
		potentials and in vivo-in vitro	
21654	16501	comparison of starch diges-	
21660		tion, USSR study.....	
21657	11226	synchronization of motor units and	
21661		related model representations.....	
21663		<b>Nervous system:</b>	
		central:	
21664	5999	effects of chronic exposure to or-	
		ganophosphate insecticides....	
4699	20108	electrophysiology of action of	
2160,	20254	piridrol, USSR study.....	
11987	7010	USSR studies.....	
5610A		cybernetics, Rumanian study.....	
		developing and diapausing Lepi-	
		doptera pupae, bioelectric ac-	
202	16141	tivity, USSR study.....	
		diseases.....	
		electronic digital computers for	
10465	11235	use in diagnosis, USSR study....	
	16007	USSR studies.....	
		electrophysiology, neurochemical	
5969		mechanisms of cortical activa-	
		tion, USSR study.....	
		excitation, strength, labor activity	
		affected by variation, USSR	
		study.....	
4139	11004	higher activity.....	
		and conditioned reflexes, USSR	
11335	9107	studies.....	
11335	8869	conference on problems, reports....	
11335		investigation, elements of auto-	
		mation in mechanics, USSR	
		study.....	
	16539	reflex systems and chemical influ-	
		ence on conditioned reflex ac-	
		tivity, USSR study.....	
	7062	USSR studies.....	
8024	10869	illnesses, hydrogen sulfide therapy	
17		in treating, USSR study.....	
905, 2170	20411	neurological and sensory disease	
		service program, PHS.....	
	15060	neuropathology, USSR study.....	
	12716	physiology, current problems,	
		USSR study.....	
	991	proteins, USSR study.....	
13650	20375	resolution of all-Union congress of	
		neuropathologists and psychi-	
		atrists, USSR study.....	
9650,	7236	USSR studies.....	
1802-803	21465	white rats, detection of labelled	
11293		ribonucleic acid, USSR study....	
	18345	see also Reflexes.	
		<b>Nestingen, Ivan A., Federal Govern-</b>	
18664		<b>ment interests in group health</b>	
14467	11554	<b>practice</b> .....	
1564		<b>Nestrud, Lorne M., soil survey report,</b>	
	18953	<b>Minnehaha County, N. Dak.</b> ....	
12201	14284	<b>Nests, structures for wood ducks, im-</b>	
		<b>proved designs</b> .....	
		<b>Netherlands:</b>	
		double taxation, convention, ex-	
		tension to Netherlands An-	
		tilles.....	6377
		ratification, report.....	15615
		educational data.....	585
		establishing business.....	8813
		foreign trade regulations.....	10696
		gas appliances and equipment, out-	
		look for American manufac-	
		turers.....	21071
		gas appliances, household and com-	
		mmercial, U.S. Market.....	146
		German boundary, study.....	11622
		imports, what can you sell.....	21075
		market factors.....	14388
		<b>Netherlands Antilles:</b>	
		double taxation, convention.....	6377
		ratification, report.....	15615
		<b>Networks, see Electric networks.</b>	
		<b>Netzeband, F. P.:</b>	
		mineral industry of Texas.....	2989
		sulfur resources and production in	
		Texas, etc.....	20475
		<b>Neubauer, W. G., microacoustic sys-</b>	
		<b>tem analysis by measurement</b>	
		<b>of freefield sound speed</b> .....	18866
		<b>Neuberger, Maurine B., testimony,</b>	
		<b>hearings</b> .....	14156
		<b>Neuder, Stanley M., thermophoto-</b>	
		<b>tropic behavior in perovskite-</b>	
		<b>structured titanates</b> .....	9606
		<b>Neufeld, Henry N., cardiovascular re-</b>	
		<b>search in Israel</b> .....	20647
		<b>Neuman, Robert B., fossils in Ordo-</b>	
		<b>vician tuffs, northeastern</b>	
		<b>Maine</b> .....	14338
		<b>Neuman, Rozal, relief</b> .....	236
		<b>Neuristor, investigation of model,</b>	
		<b>USSR study</b> .....	5360
		<b>Neurological diseases, see Nervous</b>	
		<b>system.</b>	
		<b>Neurological Diseases and Blindness,</b>	
		<b>National Institute of, see Na-</b>	
		<b>tional Institute of Neurologi-</b>	
		<b>cal Diseases and Blindness.</b>	
		<b>Neurology:</b>	
		<b>Bulgarian Scientific Association of</b>	
		<b>Neurology, Psychiatry, and</b>	
		<b>Neurosurgery, activities re-</b>	
		<b>port</b> .....	12980
		<b>comparison of postoperative neu-</b>	
		<b>rological picture with EEG</b>	
		<b>changes during cardiac sur-</b>	
		<b>gery under conditions of ar-</b>	
		<b>tificial circulation</b> .....	11234
		<b>Soviet studies</b> .....	10865
		<b>Neuromuscular disorders, progress in</b>	
		<b>research, summary</b> .....	14955
		<b>Neurons, see Nerves.</b>	
		<b>Neuropathology, see Nervous system.</b>	
		<b>Neuropharmacology, see Pharmacol-</b>	
		<b>ogy.</b>	
		<b>Neurophysiology, equipment for neu-</b>	
		<b>rophysiological investigations,</b>	
		<b>USSR studies</b> .....	19845
		<b>Neuropsychiatry, organization of</b>	
		<b>neuropsychiatric aid, USSR</b> ....	7222
		<b>Neuroses, psychoneurological ser-</b>	
		<b>vices in USSR</b> .....	2576
		<b>Neurosurgery, see Surgery.</b>	
		<b>Neustadter, Harold E.:</b>	
		low-coverage heat of adsorption—	
		alkali metal atoms on tungsten—	
		atom-metal interaction theo-	
		ries.....	18758
		Lennard-Jones atom-atom in-	
		teraction theory.....	18759
		alkali metal ions on tungsten,	
		atom-metal interaction theory....	18784
		<b>Neutrinos, supernovas, and neutron</b>	
		<b>stars, final evolution</b> .....	14845



# INDEX 1964

	Entry		Entry
Neutrons:		New boundaries of reality (lecture)---	4308
flux, measurement, modulation of		New Britain, Conn., water resources	
photomultiplier amplification		of area	10649
factor-schematic	7563	New Brunswick Laboratory, research,	
moisture meters---		progress report, Jan.-June	
neutron moderation application		1963	5970
to coal and soil	19231	New Castle County, Del., southern,	
soil, neutron-scattering, field cor-		ground water resources	4823
relation	18064	New Crops Research Branch, plant	
radiation from nuclear weapons,		material introduced	15200
shielding, review and bibliog-		New developments in investment cast-	
raphy	7577	ing technology	20226
resonances, symmetry of induced		New England:	
U235 fission	5980	annual survey of manufactures,	
self-shielding factors for multiple-		1962, States, standard metro-	
body concentric cylindrical		politan statistical areas, and	
configurations	20572	large industrial counties, sta-	
stars, supernovae, and neutrinos,		tistics	4342
final evolution	14845	climatic summary 1951-60, decen-	
thermalization---		nial census	21920
differential, summary report	8052	climatologic data	3329
integral, annual summary report,		coast, bedrock valleys as related to	
Oct. 1, 1962-Sept. 30, 1963	13692	fluctuations of sea level	19787
transient analysis, ETNATA and		cost study of general freight trans-	
EGCR temperature, digital		portation	4872-73
computer program	15280	farm vacation businesses, charac-	
two-dimensional flux calculations		teristics and owners' experi-	
for Plum Brook reactor	21767	ences	19620
Nevada:		fisheries, summary---	
annual survey of manufactures,		1962	694
1962, standard metropolitan		1963	19718
areas and large industrial		historical floods	6825
counties	6032	milk markets, producer delivery	
Carson Desert, southern, geology	10639	patterns	16958
climatological data	3329	Passamaquoddy tidal power proj-	
electric rate book	21308	ect, values (remarks)	844
labor organizations, reporting, reg-		precipitation data, hourly	3578
ister	16574	rural recreation enterprises	17901
Lower Cambrian trilobite fauna	21356	weather stations, decadal census	15161
mineral and water resources	17608	New England Tank Industries of New	
print report as Senate document,		Hampshire, Inc., excessive in-	
report	15690	terest expense included in price	
mineral industry, minerals year-		for petroleum storage, GAO	
book chapter	11317	report	6765
municipal waste facilities, 1962 in-		New era (periodical)	3784
ventory	3109	New 4-ocean challenge	15015
municipal water facilities	18914	New Guinea, labor law and practice	20434
national forests, recreation	12438	New Hampshire:	
natural resources	21370	annual survey of manufactures,	
northeastern, floods, Feb. 1962	18118	1962, standard metropolitan	
precipitation data, hourly	3578	statistical areas, and large	
public land grants, repeal act---		industrial counties, statistics	4342
law	17276	census of business, 1963, retail	
report	15738	trade, area statistics	21026
retirement systems, divide for so-		climatic summary 1951-60, decen-	
cial security purposes		nial census	21920
law	17241	electric rate book	19697
reports	12229	fishery products, wholesale dealers,	
southwestern, Miocene floras from		list	702, 18003
Fingerrock Wash.	18184	labor organizations, reporting,	
statehood commemorative 5-cent		register	16570
postage stamp (poster)	13375	mineral industry, minerals year-	
water supply---		book chapter	20490
fall summary, 1964	20802	municipal waste facilities, 1962, in-	
outlook and snow surveys	4141	ventory	3101
weather stations, decadal census	16919	municipal water facilities	18906
Nevada Test Site, story	13722	public school finance program,	
Nevel, D. E., circular plates on elastic,		1962-63	2284
sealed foundations	8509	southeastern, geology and ground-	
Neville, J. Ryan, oxygen breathing		water resources	19794
equipment, continuous func-		thorium and iridium in 3 early	
tional testing	74	Paleozoic plutonic series, dis-	
Neville, William C., fishery for scup		tribution	21350
with special reference to fluc-		timber resources	8700
tuations in yield and their		weather stations, decadal census	15161
causes	15929	women workers	1666
Nevis, plant import requirements	13573	New Haven, Conn., occupational wage	
New Albany, Ky., formation, black		survey	11278
shales, specific-gravity rela-		New Jersey:	
tionship to oil-yield	20507	annual survey of manufactures,	
New Bedford, Mass., scallop and		1962, standard metropolitan	
flounder industry, technical		statistical areas, and large in-	
study	17028	dustrial counties	4343
		climatological data	3329

# JANUARY-DECEMBER

	Entry		Entry
New Jersey—Continued		New Orleans, La.:	
compact concerning Delaware River		Cotton Exchange, futures trading	
Port Authority, consent of		and open contracts in cotton...	3545
Congress—		occupational wage survey.....	11283
hearing.....	4505	Plaza Tower building, foundation	
law.....	13870	laying ceremony address.....	13818
reports.....	2087, 2187	New Orleans, Battle of, Sesquicentennial	
compact establishing Delaware		Celebration Commission, see Battle of New Orleans Ses-	
River Joint Toll Bridge Com-		quicentennial Celebration Com-	
mission, consent of Congress to		mission.	
supplemental agreement, re-		New series on Federal funds.....	19708
port.....	346	New York Airways, Inc., accident....	13786
electric rate book.....	4708	New York Central RR., emergency	
Federal-aid highway program, in-		board report.....	2290
adequate administration, GAO		New York City:	
report.....	21338	Bronx, income, education, and un-	
fishery products, wholesale dealers,		employment.....	2966
list.....	707, 18008	exchanges, futures trading and	
5-cent tercentenary commemorative		open contracts in cotton, wool	
(poster).....	11536	and wool tops, etc.....	3546
labor organizations, reporting, reg-		Federal reserve member banks, con-	
ister.....	16570	diction, weekly statement.....	3349
landings, fish and shellfish.....	3785	Mercantile Exchange, futures trad-	
annual summary, 1963.....	17994	ing and open contracts in po-	
mineral industry, minerals year-		tatoes, eggs, butter, and rice....	3548
book chapter.....	1420, 21702	occupational wage survey.....	18631
municipal waste facilities, 1962 in-		principal electric facilities, map....	673
ventory.....	3102	Queens, income, education, and	
Municipal water facilities.....	18807	unemployment.....	2967
precipitation data, hourly.....	3578	New York City National Shrines Ad-	
public school finance program,		visory Board:	
1962-63.....	4640	sale of historic shrine medals, lib-	
radium cases, epidemiological fol-		erty series.....	6173
low-up.....		law.....	460, 2094
current data.....	11862	reports.....	10423
progress report, report of Medical		New York Harbor, Ellis Island, dis-	
Study Group, etc.....	11863	posal.....	
southern, water supply character-		New York State:	
istics of streams.....	824	annual survey of manufactures,	
sweetgum seed, production, etc.,		1962 standard metropolitan	
1962.....	8654	statistical areas, and large in-	
sweetgum stands, site index related		dustrial counties.....	4343
to soil and water-table.....	784	central, snow deposition and melt	
New London, Conn., see Coast Guard		under different vegetation cov-	
Academy, New London.		ers.....	8649
New Mexico:		climatological data.....	3329
annual survey of manufactures,		electric rate book.....	10527
1962, standard metropolitan		federal aid highway program, de-	
areas and large industrial		ficiencies and problem areas ad-	
counties.....	6032	ministered by Public Roads	
climatic summary, 1931-52.....	13517	Bureau, GAO report.....	8710
climatological data.....	3329	fishery products, wholesale dealers,	
coal, hydrogenation at short resi-		lists.....	
dence and high temperature.....	14752	coastal area.....	706, 18007
Costilla Creek compact, amend-		Great Lakes area.....	731
ment.....		labor organizations, reporting, reg-	
law.....	1927	ister.....	16570
report.....	492	landings, fish and shellfish.....	3791
electric rate book.....	2322, 21309	annual summary, 1963.....	15912
floods, magnitude and frequency....	18116	mineral industry, minerals yearbook	
itch mite, psorergates, reported in		chapter.....	1421
sheep and cattle.....	16937	municipal waste facilities, 1962	
labor organizations, reporting, reg-		inventory.....	3102
ister.....	16573	municipal water facilities.....	18907
municipal waste facilities, 1962 in-		onions, fungicides and field spacings	
ventory.....	3107	related to Botrytis neck rot....	20900
municipal water facilities.....	18912	precipitation data, hourly.....	3578
natural resources.....	19811	workmen's compensation, contro-	
Navajo Indian Reservation road		verted cases.....	16909
construction program, deficien-		New York World's Fair, United States	
cies in Administration, GAO		pavilion, Government publica-	
review.....	18087	tions display, list.....	15039
pecan production, economic as-		New Zealand:	
pects.....	17900	aviation transport services, agree-	
precipitation data, hourly.....	3578	ment.....	18969
relief.....		beef and veal, trade agreement	
law.....	19404	with.....	9831
report.....	17741	citrus producers and markets.....	765
tellurium resources.....	5493	establishing business.....	2455
western, seeding test with four-		foreign trade regulations.....	6858
wing saltbush.....	2380	labor conditions.....	11293
see also Picuris Pueblo.		lights and fog signals, list.	
		change.....	11311, 18845

# INDEX 1964

Entry	Entry
New Zealand—Continued	
logistical support for UN operations	
in Korea, agreement	11627
sailing directions, change	7635
TiROS II radiation data recorded	7494
at night	12558
trade mission, report of 1964	
Newark, N.J.:	
motor carrier accident	876
occupational wage survey	13066
railroad accident	876
Newark Bay:	
navigation channels, maintenance,	
engineer report—	
departmental edition	8518
document edition	8260
Newfoundland, establishment of long	
range aid to navigation	
(Loran-C) station agreement	21888
Newland, Robert G., gravity-independ-	
ent photosynthetic gas ex-	
changer	11784
Newman, Allen L., soil survey report,	
Cochran County, Tex.	15092
Newman, Perry A., hypersonic conical	
flow parameters for air in ther-	
modynamic equilibrium	7504
Newport, Carl A., testing log grades	2390
Newport News, Va., occupational	
wage survey	18635
Newport News Shipbuilding and Dry	
Dock Co., material price in-	
creases for construction of	
U.S.S. Enterprise, GAO re-	
port	21344
News bulletin, USDA employee	4128
News digest:	
Federal Power Commission	3792
Securities and Exchange Commis-	
sion	3793
News for farmer cooperatives	3794
News letters:	
Civil War Centennial Commission	3815
cooperative research program, Edu-	
cation Office	3369
information from President's Com-	
mittee on Equal Employment	
Opportunity	3596
medical newsletter—	
Aviation Medical Service	3715
Medicine and Surgery Bureau	3714
NBS publications newsletter	11434
rural areas development	3997
State Department	3415
technical reports	4079
to extension program leaders, rural	
defense	3633
United States National Commission	
for UNESCO	4104
News summary, Federal Trade Com-	
mission	3501
Newsletters, see News letters.	
Newsnotes on education around	
world	3795
Newsom, William A., Jr., stability,	
etc., of 4-propeller tilt-wing	
V/STOL transport	20590
Newspapermen, employment outlook	7379
Newspapers, see Press.	
Newsprint, see Paper.	
Newton, Chester W., dynamics of	
severe convection storms	11699
Newton, Franklin E., fiber and spin-	
ning properties of cotton as	
affected by certain harvesting	
and ginning practices, Yazoo-	
Mississippi Delta, 1959-60	13587
Newton, G. P., response of vacuum	
gauges aboard Explorer XVII	7533
Newton, John H., soil survey, Fulton	
County, Ky.	20809
Newton Water Users' Association:	
contract, approve—	
law	12009
report	10262
Nghien-cuu kinh-te (periodical):	
translations	5272
NHL, see National Heart Institute.	
Nicaragua:	
farm output and trade, recent	
shifts	12314
foreign trade regulations	14384
NICHHD, see National Institute of	
Child Health and Human De-	
velopment.	
Nicholls, Charles A., fats and oils,	
vegetable crushers, summary	
1963	10051
Nicholls, Harry P., validity of scaling	
laws for explosion-generated	
motion	14754
Nichols, George C., survey of R & D	
funds, 1961, and R & D scien-	
tists and engineers, Jan. 1962	13306
Nichols, Landon R., sodium vapor ex-	
pansion characteristics deter-	
mination with inert-gas-injec-	
tion pressure-measuring tech-	
nique	11405
Nichols, Paul R., crab larvae (Calli-	
nectes), in plankton collections	
from cruises of MV <i>Theodore</i>	
N. Gill, South Atlantic coast,	
1953-54	4743
Nicholson, David E., hydraulic back-	
fills and vibratory compaction	
tests	14759
Nicholson, William R.:	
age and size composition of men-	
haden catch along Atlantic	
Coast—	
1959	19738
1960	19739
Nickel:	
alloys—	
Al <sub>2</sub> O <sub>3</sub> 2dispersion-hardened, elec-	
trodeposition	7665
aluminum, friction and wear in	
vacuum	13235
cobalt-nickel, electrochemical re-	
covery from superalloy scrap,	
effect of 2-brage coating, etc.,	
on 1200°F stress-rupture	
strength of L-605, A-286, and	
Inconel sheet	1454
electroslag remelting effect on	
plasticity, USSR study	1014
heat-resisting, age-hardening	
characteristics, Japanese study	12961
Influence of rare-earth elements	
on properties, USSR study	1149
liquid copper-nickel, activities of	
copper and nickel	9526
mechanical properties at elevated	
temperatures, Japanese study	12876
anisotropy constant, dependence to	
temperature and saturation	
magnetization, USSR study	930
M 252 alloy, effect of heat treat-	
ment on mechanical properties,	
USSR studies	14419
mineral industry survey, monthly	3796
minerals yearbook chapter	18674
production, titanium equipment,	
USSR study	10889
replacing by cobalt, effects on ten-	
sile properties and hardness of	
stainless steel	11333
sulfides, low-temperature heat ca-	
pacities and entropies at	
298.15° K	18694
welding nickel and its alloys,	
USSR	5259
Nickelsen, William R., theoretical per-	
formance of electrostatic thrus-	
tors with analytic space-charge	
flows	9617
Nickerson, John T. R., sub-steriliza-	
tion radiation doses effect on	
storage life of clams, etc.	5988

# JANUARY-DECEMBER

	Entry		Entry
Nicol, Helen O., Negro women workers in 1960	11722	Nishikawa, S., television pictures, area properties	17006
Nicolaus, John J., automated approach to technical information retrieval, library applications	15078	Nitric acid:	
NIDR, see National Institute of Dental Research.		oxidation of anthracite, products obtained	20509
Niebel, B. W., machine shop, job type	11606	process for producing alumina from clay	11337
Niemeyer, Gerhart, consultation with Un-American Activities Committee, irrationality of Communism, print additional copies, report	17567	Nitridation, high temperature, niobium in ultrahigh vacuum	8085
Nieve, Sister, see Gelado, Aurora M.		Nitrides, see Titanium nitride.	
Nieves, Rafael A., censuses of population and housing in Puerto Rico, 1960, processing the data	1808	Nitrofurans, 5-nitrofurans derivatives, antibacterial preparations, USSR studies	21586
Niger, foreign trade regulations	14383	Nitrogen:	
Nigeria:		absorption of infants fed on ionite milk in acute gastrointestinal diseases	5027
economy, basic data	14373	cavitation and effective liquid tension in tunnel venturi	7510
foreign trade regulations	862	electron-ion recombination, microwave interferometer measurements	1452
labor, etc.	5435	film boiling heat-transfer coefficients obtained in forced flow, correlation study	13230
market for U.S. products, international commerce supplement	6843	flow—	
space vehicle tracking station program, agreement	21891	properties of thermally perfect carbon dioxide and nitrogen mixtures, tables	11361
U.S. Army area handbook	17054	real-gas charts	5511
Nigh, June, activities of Committee on Foreign Affairs, House, Jan. 9-Dec. 30, 1963	12131	held in solution by blood, correlation with whole blood constituents	5903
Night vision, see Sight.		liquid—	
Nightglow, see Airglow.		fertilizers, USSR utilization	9812
Nightwear, knit, current industrial reports	3391	helical tube separation of nitrogen gas	13171
NIH, see National Institutes of Health.		metabolism experiments, automatic computation and summarization	9919
Nikolitch, Radoje, our 100,000 biggest farms, their relative position in American agriculture	6553	minerals yearbook chapter	18675
Nilson, Rozsi, see Neuman, Rozsi.		observation of (O,O) negative band of N <sub>2</sub> in dayglow	9600
Nimbus spacecraft, see Satellites.		phosphorus and precipitation interrelationship in production of bromegrass-crested wheatgrass hay	5858
NIMH, see National Institute of Mental Health.		plasma afterglow, probability of collision for momentum transfer of slow electrons in	20526
Nimonic alloys, 80A, mechanical properties, effects of Ti and Al, etc., Japanese study	12962	Rydberg absorption series of N <sub>2</sub>	17004
Ninepipe National Wildlife Refuge, birds, list	15922	solubility in water and extracted human fat, determination	7999
Ninhydrin, color reaction test for detecting buddy flavor in maple syrup	1687	vibrational-nonequilibrium flow in hypersonic nozzles, errata	14837
Niobium:		Wright's interpretation of temporal variation of O/N <sub>2</sub> ratio in thermosphere, notes on	20960
alloys		Nitze, Paul H., nomination, hearing	522
collumbium-halfniium equilibrium diagram	16642	Nkrumah, Kwame, U.S. aid opposed by Ghanaian students	6518
local order and solid-solution strengthening study	4226	NLRB, see National Labor Relations Board.	
suitable for use at high temperatures	7461	NMC, see National Meteorological Center.	
electrorefining	18689	Nobles County, Minn., geology and ground-water resources	18146
heat treatment, USSR study	2772	Nobles of Mystic Shrine, see Ancient Arabic Order of Nobles of Mystic Shrine.	
high-purity, analysis by optical emission spectrography	11321	Noctilucent clouds, see Clouds.	
high temperature oxidation and nitridation in ultrahigh vacuum	8085	NODC, see National Oceanographic Data Center.	
micro-alloying element in steels and effect on welding technology	1577	Noise:	
minerals yearbook chapter	18662	aircraft—	
niobium - tungsten-zirconium and niobium-molybdenum-zirconium ternary systems, USSR investigation	4907	and its problems, bibliography	6612
welding—		bypass jets, effects of temperature, measured in Langley noise research facility	16695
niobium and its alloys, USSR study	4911	citizen's guide	4674
USSR studies	11141	application of acoustic theory to prediction of sonic-boom ground patterns from maneuvering aircraft	20580
X-ray spectrographic analysis for trace quantities of tantalum	16634		
Niobium carbide, thermodynamic data	13122		
Niobrara formation, stratigraphy	14344		



# INDEX 1964

Entry	Entry
Noise—Continued	Nonmetals—Continued
device for continuous recording of	minerals—
signal to noise ratio, USSR	crude, Federal item identification
study	guides for supply cataloging—
explosives testing, abatement—	fabricated, Federal item identification
figure of X-band waveguide mixer	guides for supply cataloging—
with tunnel diode, measurement	3476, 12295
immunity of communications systems	nonmetallic article shaping or treating,
with error correcting feedback, USSR study	classification bulletin—
noise and structural vibration, recent research—	9692
non-linear, analysis in FDM telephony transmission over SSB-PM satellite communication system—	Nonwhite population:
14892	aging nonwhite and his housing,
problems associated with operation of Army aircraft—	analysis of 1960 census data—
5949	housing, changes 1950-60—
radio—	832
novel horn antenna reduces side lobes, improves radiation pattern—	women workers, current data—
11372	9892
quarterly data—	Nordberg, W., rocket-grenade experiment—
13274, 16740, 18806	7516
random, nonlinear response of windows—	Nordholt, Louis E., outlook for American gas appliances and equipment in Netherlands—
3018	21071
repetitive bursts, apparent change—	Nordin, Carl F., jr.:
5897	flow resistance, etc., Rio Grande near Bernallillo, N. Mex.—
transistorized instrumentation system for acoustical data acquisition in vicinity of large rocket engines and space vehicle boosters—	10642
20608	sediment transport parameters, Rio Puerco—
turbulent boundary layer, as related to design criteria for high performance vehicles—	811
11394	Noren, T. M., columbium as microalloying element in steels, etc.—
see also Muffling devices—Sonic boom.	1577
NOL, see Naval Ordnance Laboratory, White Oak, Md.	Norfolk, Va.:
Nolan, Loretto R., analysis of work stoppages, 1962—	aerial radiological measuring survey (ARMS)—
1377	4293
Nomenclature, see subjects.	occupational wage survey—
Nomination and election of the President and Vice President—	18635
8404B	see also Naval Air Station, Norfolk.
Nominations:	Norfolk Southern Ry., accident—
presidential, papers of Senate relating to, 1789-1901—	12571
21781	Normal mode theory, see Vibration.
see also names of persons.	Normal probability function, deposition and washout computations based on generalized Gaussian plume model—
Nomography (mathematics):	117
two nomograms for use in computing ratios of 2-dimensional vector qualities—	Normal volunteer program of NIH Clinical Center—
20643	1504
Nonadiabatic factors in short-term forecasting of lower-atmosphere geopotential fields, USSR—	Normally embedded sets of normal spaces—
20321	7567
Nonagricultural employment, see Employment.	Normative distributions of AQE aptitude indexes for high-school-age boys—
Noncash items, collection, regulation, amendment—	19162
17987	Norris, C. B., short-column compressive strength of sandwich constructions as affected by size of cells of honeycomb core materials—
Nonequilibrium expansion of plasma from thermionic source—	12446
1477	Norris Lake, fishing—
Nonferrous alloys, see Alloys.	11663
Nonferrous castings, see Castings.	Norry, Leonard J., characteristics of housing units classified by 1959 income of occupants—
Nongraded schools—	17087
19635	North, Max H., reconciliation with 1958 census of retail trade with monthly report—
Nonlinear adaptive control systems with storage—	1825
14777	North (U.S.):
Nonlinear equations, see Equations.	civil rights, public schools, Buffalo, N.Y.—
Nonlinear interaction of electromagnetic wave with time-dependent plasma medium—	10097
13638	North America:
Non-Linear Processes in Ionosphere Conference, see Conference on Non-Linear Processes in Ionosphere.	amphipods from west coast, new and unusual species—
Nonlinear stability, see Stability of aircraft.	7607
Nonmetals:	Atlantic Coast, tidal current tables, 1965—
industries—	19342
employment and injuries, minerals yearbook chapter—	bark canoes and skin boats, general information—
20471	20653
injury experience, 1960—	contributions to ethnology, index—
1402	departmental edition—
review, 1962, minerals yearbook chapter—	4272
2997	document edition—
technologic trends, minerals yearbook chapter—	4427
1446	east coast—
	lights and fog signals, list—
	1523,
	13310, 20674
	tide tables, 1965—
	11960
	eastern, pondweeds and pondweed-like plants—
	15917
	geology, bibliography—
	18114
	Helderberg Group and position of Silurian-Devonian boundary—
	6799
	networks employed in monitoring airborne fission products intercalibration—
	18860
	Northeast, skler market—
	8019
	ozonesonde observations, research report—
	7966

# JANUARY-DECEMBER

	Entry
North America—Continued	
stenomidae, review of family.....	20657
west coast—	
lights and fog signals list,	
change.....	3074, 13311, 18845
tide tables, 1965.....	6109
western, diseases of Monterey pine.....	19750
North American Association of Alco-	
holism Programs, role of	
Health, Education, and Wel-	
fare Department to member-	
ship (paper).....	20769
North American Van Lines, Inc., ac-	
cident.....	14405
North Atlantic slope basins, <i>see</i> At-	
lantic States.	
North Atlantic States, <i>see</i> Atlantic	
States.	
North Atlantic Treaty Organization:	
attaining closer partnership in At-	
lantic alliance (address).....	13465
cooperation for mutual defense,	
agreement—	
hearings.....	17440
report.....	19457, 19569
new dimension in Atlantic partner-	
ship (address).....	5698
parliamentarians conference, 1963,	
report of House delegation.....	12097
status of forces agreement, criminal	
jurisdictional operations—	
hearing.....	2230, 17867
reports.....	2227, 14100, 17855
strength dependent on partnership	
of U.S. and united Europe (ad-	
dress).....	15259
North Bradfield River, iron prospect,	
geology.....	2414
North Carolina:	
aerial radiological measuring sur-	
vey ARMS, Norfolk Peninsula	
area.....	4293
annual survey of manufactures,	
1962, statistics for States,	
standard metropolitan statisti-	
cal areas, and large industrial	
counties.....	6029
civil rights, public schools, 1963.....	15347
climatological data.....	3329
copper deposits, geology.....	800
electric rate book.....	14249
fishery products, wholesale dealers,	
list.....	713, 18014
labor organizations, reporting, reg-	
ister.....	16571
landings, fish and shellfish.....	3798, 12418
mineral industry, minerals yearbook	
chapter.....	21703
municipal waste facilities, 1962 in-	
ventory.....	3103
municipal water facilities.....	18908
precipitation data, hourly.....	3578
public assistance, federally aided	
programs, deficient practices	
relating to Federal matching	
funds, Welfare Administra-	
tion, GAO report.....	8707
public school finance program,	
1962-63.....	4641
truck inventory and use survey,	
Apr. 1, 1963.....	17082
water-supply characteristics of	
streams.....	2435
women—	
labor laws, summary.....	13545
legal status.....	15174
workers, 1960.....	1667
North Cascades Primitive Area, study	
and reclassification.....	2394
North Central region, <i>see</i> Central	
States.	

	Entry
North Dakota:	
annual survey of manufactures,	
1962, standard metropolitan	
statistical areas, and large in-	
dustrial counties, statistics.....	6028
climatological data.....	3329
District Court, Williston, additional	
place, report.....	17735
electric rate book.....	17982
labor organizations, reporting, reg-	
ister.....	16573
mineral industry, minerals year-	
book chapter.....	1422
Mississippi River and tributaries	
fishery products, wholesale	
dealers list.....	8611, 18022
municipal waste facilities, 1962 in-	
ventory.....	3106
municipal water facilities.....	18911
precipitation data, hourly.....	3578
public school finance program,	
1962-63.....	4642
statue of John Burke, acceptance,	
proceedings.....	2131
women—	
labor laws, summary.....	15176
workers, 1960.....	13554
North Hollywood, Calif., aircraft ac-	
cident.....	6058
North Korea, <i>see</i> Korea.	
North Little Rock, Ark.:	
occupational wage survey.....	1380
population, special census.....	175
North Pacific Ocean, <i>see</i> Pacific Ocean.	
North Platte River, basin, Colo.,	
Wyo., Nebr., national land re-	
serve, classification.....	11301-302
North Sea, lights and fog signals,	
list.....	11478, 14992, 21815
North Vietnam, <i>see</i> Vietnam.	
Northeast (U.S.):	
forest disease research, guide.....	769
green ash provenances, 13-year	
growth.....	8650
labor organizations, reporting, reg-	
ister.....	16579
principal electric facilities, map.....	673
rural nonfarm areas, consumer ex-	
penditures and income, 1961.....	18626
sharks, anglers' guide.....	10557
small cities, consumer expenditures	
and income, 1961.....	11269
urban places, consumer expendi-	
tures and income, 1960-61.....	13043, 18621, 6721
wildlife refuges.....	
Northeast Shellfish Sanitation Re-	
search Center, research pro-	
gram.....	11565
Northeastern Forest Experiment Sta-	
tion:	
annual report, 1963.....	14295
Forest Products Marketing Labora-	
tory, research facility.....	768
Northeastern States, <i>see</i> Northeast	
(U.S.).	
Northern Cheyenne Tribe of Tongue	
River Reservation, <i>see</i> Chey-	
enne Indians.	
Northern Cotton Textiles Associa-	
tions, <i>see</i> Berkshire Hathaway	
Inc.	
Northern Forest Fire Laboratory, re-	
search program, general infor-	
mation.....	771
Northern Hemisphere, <i>see</i> Hemi-	
sphere, Northern.	
Northern Ireland, <i>see</i> Great Britain.	
Northern Rhodesia:	
double taxation convention.....	7788
Southern Rhodesia boundary,	
study.....	9800
tobacco production and marketing.....	14291
Northern Utilization Research and	
Development Division, publica-	
tions and patents, list.....	7901

# INDEX 1964

	Entry		Entry
Northridge, Calif., railroad accident.	4879	Notice to mariners.....	3800
Northwest (U.S.):		chart correction list... 1524, 11480,	21819
Christmas trees—		Great Lakes and tributary waters.	3801
cultural practices for growing—	2363	Notices of judgment:	
harvesting and marketing.....	2366	food, drug, and cosmetic act....	3802-3,
selecting good area for growing—	2362	hazardous substances labeling act.	6736,
electric consumers, guarantee first			18040
call on energy generated in			
Federal hydroelectric plants,			
report	17597	insecticide, fungicide and rodent-	
Pacific Northwest—		cide act.....	13572
current discharge at selected sta-		Notices to airmen, international	
tions	4058	notams.....	3608
month-end storage in major res-		Notifiable diseases, see Contagion and	
ervoirs	4058	contagious diseases.	
national forests—		Noujalm, George E., see NeJame,	
general information.....	2370	George E.	
high mountain areas, manage-		Nova Scotia, sailing directions,	
ment objectives and policies....	2358	change.....	7627
power consumers preference....	6376	Novak, Arthur F., radiation pas-	
report	15546	teurization of shrimp.....	13706
precipitation and temperature,		Novak, Gertrude C., testimony, hear-	
monthly	3829	ings.....	4594, 6526
stumpage and log supply, quar-		Novosibirsk Scientific Center, orga-	
terly report.....	3830	nization, activities, etc.....	4992
principal electric facilities, map....	676	Novosibirsk State University, USSR,	
reforestation trends and cost.....	12485	translation of pamphlet.....	5003
water resources—		Nozales:	
summary.....	3831	conical and contoured, longitudi-	
weekly report.....	3832	nal characteristics at hyper-	
windthrown timber survey, 1962....	15937	sonic Mach numbers.....	20612
Northwest Airlines, Inc., accident..	10087	flow through nozzle, calculations..	13250
Northwind (icebreaker):		hypersonic, vibrational-nonequilib-	
USCGC, oceanographic cruise, Ber-		rium flow of nitrogen, errata.....	14837
ing and Chukchi Seas, July-		Mach 6 open-jet system, diffuser	
Sept. 1962, report.....	11961	performance and model-block-	
Norton, James J., Geology and min-		age for tunnel operation.....	16700
eral deposits of some pegma-		rocket inserts, refractory materials,	
tites in the southern Black		thermal shock evaluation.....	13331
Hills, S. Dak.	4783	rocket, vapor-deposited tungsten	
Norton, R. B., Martian and Cytherian		coatings.....	13135
ionospheres.....	14868	supersonic aerodynamics hand-	
Norvitch, Ralph F., geology and		book.....	15008
ground-water resources of No-		total enthalpy of 1-dimensional	
bles County and Jackson		flow with various gases.....	7549
County, Minn.	18146	NPPI, see Poultry.	
Norway:		NPS, see National Park Service.	
bibliography of social science peri-		NPS national prisoner statistics se-	
odicals and monograph series,		ries.....	11541, 18883
1945-62.....	8134	NRAB, see National Railroad Adjust-	
communications satellites, inter-		ment Board.	
continental testing, agree-		NRL, see Naval Research Laboratory.	
ment.....	1604	NROTC, see Naval Reserve Officers	
economy, basic data.....	14387	Training Corps.	
education, exchange program, fi-		NSF, see National Science Founda-	
nancing, agreement.....	11634	tion.	
gazetteer, official standard names..	18097	NSLI, see Life Insurance.	
lights and fog signals, list....	11479	NSSP, see National Severe Storms	
maritime matters, use of ports and	21816	Project.	
territorial waters by N.S. Sa-		NTIP, see Turkeys.	
vannah, agreement.....	13481	Nuckel, Dean C., replenishing under-	
mutual defense assistance.....	1620,	ground water supplies on	
21886		farm.....	20925
northwest and north coasts, sail-		Nuclear accident contamination con-	
ing directions, change.....	18839	trol.....	11835
official publications, agreement....	20829	Nuclear energy, see Atomic energy.	
U.S.S.R. boundary, study.....	7762	Nuclear engineering:	
Norwood, Douglas, Bonneville Power		challenge of new scientific environ-	
Administration, bibliography.....	19271	ment (remarks).....	4309
Norwood, Janet L., labor law and		education, interrelated role of uni-	
practice in Union of Burma.....	16587	versities and Federal agencies,	
Nose (aircraft):		conference proceedings.....	11867
shapes and drag coefficients in		materials list.....	1774-75,
helium, Reynolds numbers, ef-			8071, 13710, 21016-17
fects on induced pressures.....	1486	index.....	8072-73
Noss, Richard B., Thai reference		Soviet nuclear power engineering,	
grammar.....	9807	information on.....	5141
Notes, see Treasury notes.		Nuclear explosions:	
Notice (law):		base surge analysis, Project Pre-	
insured banks, change in control of		Buggy.....	4298
management—		close-in shock studies.....	5979
hearing.....	17644	detonations, timing and firing sys-	
law.....	19401	tem.....	121
report.....	17570	engineering with nuclear explo-	
Notice to aviators.....	3799	sives, 3d Plowshare sympo-	
		sium.....	17063

# JANUARY-DECEMBER

	Entry
Nuclear explosions—Continued	
food-chain relationships of iodine-131 for Project Sedan.....	123
high altitude effects of.....	20588
manufacturing aggregate by nuclear methods, feasibility.....	17959
peaceful applications—	
intermediate range earth motion measurements.....	119
sequenced gas sampling experiment.....	118
shock induced transitions, history and recovery sample.....	120
peaceful uses—	
bibliography.....	8069
Plowshare program, report, 1963.....	11873
Project Dribble, background information.....	19263
stability of crater slopes, Project Sedan.....	122
strontium 90 fallout from nuclear tests, health hazard.....	18901
symmetry of neutron induced U-235 fission at individual resonances.....	5980
test ban proposals, military aspects, hearings.....	6495
test ban treaty—	
agreement with other government.....	1606
military implications, subcommittee report.....	10410
tests, fallout, general information.....	1787
underground detonation, radiochemical and physical measurements of debris.....	5981
use to increase petroleum recovery, feasibility study.....	14764
Nuclear explosives, <i>see</i> Atomic blasting.	
Nuclear fission:	
irradiated fission, reactor fuel and breeding material, reprocessing, annotated bibliography, supplement.....	19245
symmetry of neutron induced U <sup>235</sup> fission at individual resonances.....	5980
Nuclear fuel, <i>see</i> Reactor fuels.	
Nuclear Fuel Services, Inc., chemical reprocessing plant, hearing.....	6188
Nuclear instrument modules, standard design.....	19255
Nuclear membrane potential of nerve cell, USSR.....	11227
Nuclear ordnance, <i>see</i> Atomic ordnance.	
Nuclear physics:	
Air Force research program, history.....	67
Argonne accelerator, instrument and symbol of research progress (remarks).....	132
EURATOM reactor fuel management program analysis.....	5976
heterogeneous reactor calculation methods, test and verification.....	19237
nuclear physics and linear accelerators, materials of scientific technical conference, Oct. 10-14, 1961.....	15278
nuclear theory reference book, 1961-62.....	10036
Nuclear Physics Institute, Rumania, <i>see</i> Institute of Nuclear Physics, Rumania.	
Nuclear play calculator, Aggressor.....	10001
Nuclear power, <i>see</i> Atomic energy.	
Nuclear Power and Saline Water Conversion Task Group: report.....	9754
appendices.....	18936

	Entry
Nuclear power plants, <i>see</i> Nuclear reactor power plants.	
Nuclear powered ships:	
aircraft carrier, overpricing of steam generators, GAO report.....	6779
atmosphere purification, diaphragms for sulfate cycle electrolytic cell.....	5615
merchant shipping and nuclear power.....	13724
N.S. Savannah—	
fact sheet.....	9489
public liability for damage caused, agreement with Ireland.....	20845
story.....	13098
use of—	
Belgian ports and waters, agreement.....	5699
Danish ports and waters, agreement.....	18975
Norwegian ports and territorial waters, agreement.....	13481
Spanish ports and waters, agreement.....	20825
Swedish ports and waters, agreement.....	18976
United Kingdom ports and territorial waters, agreement.....	20832
ventilation system filter testing.....	19252
naval surface vessels, nuclear propulsion—	
hearings.....	4423
report.....	1987
statement of Hyman G. Rickover regarding nuclear powered Navy, hearings.....	2104
steam generator 630A, status report.....	8056
submarine components—	
overpayments made under cost-plus-a-fixed-fee contract from Combustion Engineering, Inc., GAO report.....	6774
overpricing under Westinghouse cost-plus-a-fixed-fee contracts, GAO report.....	6776
overpricing under Westinghouse subcontracts, GAO report.....	6777
submarines—	
atmospheres, hydrocarbon analyzer development.....	13345
feasibility of oxygen production by algae.....	5602
per diem payments to military personnel during construction, Navy Dept., GAO report.....	8742
U.S.S. Bainbridge, overpricing, purchased from Bethlehem Steel Co., Navy Dept., GAO report.....	8731
U.S.S. Enterprise, material price increases, unwarranted allowances to Newport News Shipbuilding and Dry Dock Company, GAO report.....	21344
U.S.S. Thresher, in memoriam, Apr. 10, 1963.....	15016
U.S.S. Sculpin, submarine atmosphere studies.....	18865
Nuclear processes in chromospheric flares.....	14921
Nuclear radiation, <i>see</i> Radiation.	
Nuclear reactions:	
and systems, classification bulletin.....	9691
plasma physics and problems of controlled thermonuclear synthesis, reports of conference, Kharkov, June 25-July 2, 1959.....	19227
tables of X-coefficients and A factors for triple angular correlation analysis.....	18780
treated by direct reaction calculation.....	7537



# INDEX 1964

Entry	Entry
Nuclear reactor power plants:	Nucleic acids—Continued
AEC power-reactor development program	role in differentiation and malignant degeneration, USSR studies
beta-radiation at 1st atomic power station, USSR study	USSR studies
BONUS boiling nuclear superheater, final summary design report	Nucleoli, <i>see</i> Cells
Carolinas Virginia tube reactor, large plant study	Nucleon 2 nucleon reaction cross sections at energies above 100 mev, literature survey
cooperative power reactor demonstration program, 1963, hearings	Nucleoproteins, localization in oocytes of frogs, detection by means of ultraviolet and luminescent microscopy, USSR study
fast ceramic reactor, 565 MWe, conceptual design	Nucleotides:
fluid engine power systems, design study	cortisone effect on metabolism in liver development
nuclear power economics, analysis, etc., 1964	sequence, interpretation in conveying ribonucleic acids, USSR study
production of fresh water from sea water, hearing	Nuclides, trilinear chart, revision sheet
USSR, 10 year results of world's first atomic electric power station	<i>see also</i> Radionuclides
water-cooled thermionic, feasibility study	Nuernberger, George F. remarks, June 23, 1964
Nuclear reactors, <i>see</i> Reactors (atomic)	Numbers, probability theory, new method, USSR study
Nuclear rockets, <i>see</i> Rockets	Numerical calculations:
Nuclear safety, review of recent developments	analysis of flow properties about blunt bodies moving at supersonic speeds in equilibrium gas
Nuclear science:	computation of S <sub>2</sub> tidal component for Pacific Ocean water area on BESM-2 electronic computer, USSR study
abstracts	diffraction effects at VLF from localized ionospheric depression, farmers' handbook of financial calculations and physical measurements
index	large, uniform circular arrays with typical element patterns
cumulative report number, with public availability citations	modified Fresnel integral arising in theory of diffraction by variable screen
quarterly	reflection of electromagnetic waves from lossy magnetoplasma
subject scope	solving problems of optimum control, USSR study
applications to agriculture	Numerical integration, <i>see</i> Integration (mathematics)
binding force of atom, interdisciplinary program of studies (remarks)	Numerical list of manufactured products, 1963 census of manufactures
conference literature, availability	Numerical lists and schedule of volumes of reports and documents, 88th Congress, 1st session
conferences, index	Numerical predictions of nonlinear diffusion with homogeneous recombination and time-varying boundary conditions
education, interrelated role of universities and Federal agencies, conference proceedings	Numerical solutions of Knudsen flow entering circular tube through small axial orifice
French developments, press information	Nurse Corps, Navy, opportunities, etc., as career
French nuclear research and installations	Nurseries (horticulture):
nuclear terms, brief glossary	bibliography on business
popular books, list	California, seedbed density and pine seedling grades
unemployment and employment in nuclear scientific era (paper)	nursery products, production and sales, 1962 and 1963
Nuclear superheat project:	nursery stock affects survival and growth of birch
11th quarterly report	root-pruning southern pines
14th quarterly report	<i>see also</i> Forest nurseries
Nuclear tests, <i>see</i> Nuclear explosions	Nursery stock, <i>see</i> Nurseries (horticulture)
Nuclear warfare, <i>see</i> Atomic warfare	Nurses and nursing:
Nuclear weapons, <i>see</i> Weapons	care, long term
Nucleate boiling, liquid film evaporation, nature	career opportunities, work with American Indians
Nuclei:	careers in mental health
elements and sound, effects on cells, USSR study	
interphase cell with different physiological functions and cytological properties, USSR study	
structure above mass number 40, low-lying state, conference, proceedings	
Nucleic acids:	
and visual perception, USSR studies	
DNA and RNA, native and irradiated by ultrasound, metachromatic reaction, USSR study	
optical properties and molecular structure, USSR biophysical study	

## JANUARY-DECEMBER

	Entry		Entry
Nurses and nursing—Continued		Nutrition—Continued	
education facilities, programming		food for fitness, daily guide.....	7925
consideration and architectural guide .....	16839	foods, nutritive value.....	19077
employment outlook.....	13052	improving teenage nutrition.....	5845
feeding mentally retarded children,		larval, influence on behavior of	
guide for nurses working with		adult insects, USSR study.....	2662
child and family.....	10079	nutrition program news (periodical)	
inservice education activities, VA		rational, popularization among	
Nursing Service, program		population, USSR.....	18515
guide.....	11675	recent developments, USSR study.....	2861
nurses' professional registries, tax-		services in mental retardation pro-	
exempt status, report.....	13962	grams, institute report.....	1829
nursing at Clinical Center, NIH.....	14949	USSR—	
nursing research grants, fellow-		studies.....	16099
ships, etc.....	9712	translations.....	2663
nursing role in counseling parents		values of edible part of foods,	
of mentally retarded children.....	10081	tables.....	19077
patient care in hospital, method of		see also Food.	
studying.....	15061	Nutrition Laboratory, see Army Medi-	
practical nursing in VA, forward		cultural Research and Nutrition	
step in career.....	16906	Laboratory.	
professional nurses—		Nutrition of plants, see Plants.	
education, assistance, hearings....	10325	Nuts:	
traineeship program—		foreign agriculture circulars.....	3520
PHS, short-term training		search for hardier nuts.....	4188
courses.....	16844	survey, U.S.....	15196
report of 1963 evaluation confer-		tree nuts—	
ence, nurses for leadership.....	5660	domestic industries, economic ap-	
psychiatric-mental health trainee		praisal.....	21259
stipends.....	13289	foreign trade prospects.....	15934
public health nurses—		production, use, value, by States,	
in program for mentally re-		1962-63.....	16887
tarded.....	10082	Nyasaland:	
patient progress, how to study.....	13406	double taxation convention.....	7788
positions classification specifica-		tobacco production and marketing.....	14291
tions, guide for State and local		Nyberg, D. W., advanced solid state	
public health agencies.....	13393	infrared detection.....	5867
working with mentally retarded		Nygaard, Hjalmar C., memorial ser-	
children, guide.....	11918	vices.....	4416
Public Health Service grants for		Nyhan, John C., weatherman in space..	11980
research.....	1555	Nylon:	
rewarding career for you as a Vet-		phenolic, thermal-shielding per-	
erans Administration nurse.....	7831	formance, effect of weight,	
role of nurse in helping—		density, and heat load.....	13225
arthritic.....	13411	sleeve for cavity amplifiers holds	
diabetic.....	13412	tuning despite heat.....	13166
schools of nursing offering trainee-		Nysmith, C. Robert, impact of copper	
ships for full-time academic		filaments into aluminum tar-	
study, 1964-65.....	21857	gets.....	7496
training act of 1964—		Nystagmus:	
hearings.....	10325, 15816	caloric, cat following rotary habi-	
law.....	17439	tation.....	4315
reports.....	13980, 17724	responses of cat to rotation and di-	
see also Nurse Corps, Navy.		rectionally equivalent and non-	
Nursing, see Nurses and nursing.		equivalent stimuli after uni-	
Nursing homes:		lateral caloric habituation.....	1790
administrators, guide.....	11563	vestibular, human, control of	
aged, long-term institutional care,		arousal and effects of repeated	
hearing.....	12247	unidirectional angular accel-	
care for veterans—		eration on responses, task.....	13731
hearings.....	12278		
law.....	17309	O	
report.....	15749	O.A.R., see Aerospace Research Office.	
design of facilities for long-term		O.A.S.D.I., see Old-age, survivors, and	
patients, references.....	3100	disability insurance.	
nursing homes and related long-		O.A.S.I. series.....	1584-88,
term care services, hearings....	12248,	3131-32, 5687-88, 7735-37, 9770-	
15789		73, 11608-610, 13452, 15083-85,	
Nusbaum, William J., stage spacing		16861, 18947, 20797-798, 21872-	
effect on performance of 2-stage		875.	
turbine.....	13246	O.M.E., see Minerals Exploration	
Nushagak district, Bristol Bay,		Office.	
Alaska, red salmon runs, statis-		O.T.S., see Technical Services Office.	
tistical records and computations,		Oahu Dam, spillway, hydraulic model	
1946-59.....	19737	Investigation.....	19663
Nutrition:		Oahu:	
benthophagous fish in Lake Dalay-		principal electric facilities, map....	680
nor, Chinese People's Republic.....	5001	southern, ground water resources..	10660
calculating value of diets, manual		Oak:	
of instructions for use of		Arizona Gambel oak, specific grav-	
punch cards for machine tabu-		ity.....	14322
lation.....	20902		

# INDEX 1964

	Entry		Entry
Oak—Continued		Observers (flight):	
northern red—		performance during low-altitude,	
variable stocking, problem in-		high-speed flight, flight simula-	
volving direct seedings-----	8645	tor study-----	7817
Wisconsin, seeding and planting		Obsolence, human, education the	
tests-----	12475	answer (remarks)-----	10035
woods, identification-----	14312	Obstetrics, <i>see</i> Labor (obstetrics).	
Oak brush, livestock poisoning in		Occlusions (meteorology), <i>see</i> Me-	
Western States, reducing		teorology.	
losses-----	20915	Occupational diseases:	
Oak Ridge National Laboratory:		effectiveness of electric sleep treat-	
master analytical manual—		ment-----	966
indexes-----	13712	guide to their recognition-----	21853
supplements-----	5985, 13713	of peripheral nerves and muscles,	
Oak Ridge Radioisotope Conference,		clinical study and classifica-	
Apr. 19-22, 1964-----	11869	tion, USSR-----	1039
Oak wilt, general information-----	14298	Soviet studies-----	21553
Oakland, Calif.:		Occupational earnings in major labor	
artery of world commerce (re-		markets, 1963-64-----	9479,
marks)-----	21300	14711, 18643	
occupational wage survey-----	11277	Occupational health, <i>see</i> Health.	
port-----	623	Occupational Health Division, activ-	
OAQ, <i>see</i> Orbiting Astronomical Ob-		ities-----	11562
servatory.		Occupational mobility through MDTA	
OAR, <i>see</i> Aerospace Research Office.		training-----	16568
OASDI, <i>see</i> Old age, survivors, and		Occupational outlook report series, 7375-73,	
disability insurance.		7380-88, 7390-96, 9382-9453,	
OASI series-----	1584-88,	13047-58.	
3131-32, 5687-88, 7735-37,		Occupational therapists, employment	
9770-73, 11608-610, 13452,		outlook-----	13051
15083-85, 16861, 18947, 20797-		Occupational therapy:	
798, 21872-875.		comprehensive restorative therapy	
Oaths:		and training of personnel in	
Patent Office, eliminate require-		neurosurgical care system,	
ments for documents filed		USSR articles-----	14634
with-----		students, educational opportunities,	
law-----	8231	Army-----	1766
reports-----	508, 6305	Occupational training, <i>see</i> Training.	
Oats:		Occupational training of women under	
composition of commercial grades.	13570	manpower development	
futures-----		and training act-----	18609
commitments of traders-----	3344	Occupational wage surveys, <i>see</i>	
trading and open contracts-----	3550	Wages.	
stem rust spread by barberry		Occupations:	
bushes-----	9958	Agriculture Department, profiles,	
OAU, <i>see</i> Organization of African		careers-----	20933
Unity.		airman career fields, prediction of	
Oberman, J. William, physician and		performance from selection	
parent of retarded child-----	6055	and basic training variables-----	11802
Obermayer, R. W., performance mea-		Army recruiting & career counsel-	
surement in flight simulation		journal-----	3965
studies-----	14790	career opportunities-----	
Obert, Leonard A., triaxial method		Army, pamphlet-----	20995
for determining elastic con-		Atomic Energy Commission in-	
stants of stress relief cores-----	16640	ternships, etc., for college grad-	
Obesity:		uate-----	19259
excess weight in children and		atomic energy, planning for scien-	
adults, relationship-----	13417	tific and technical professions,	
USSR studies-----	20210	choosing a career, economic	
Obituaries, Soviet scientists-----	11205	framework-----	7397
Obolensky, Serge, Amharic, basic		Coast Guard officer training-----	6111
course, units 1-50-----	15094	DSA civilian program for trans-	
Oborn, Eugene T., intracellular and		portation-----	21252
extracellular concentration of		engineering in Federal Govern-	
manganese and other elements		ment-----	10110
by aquatic organisms-----	6818	engineers and physicists, weather	
OBR series-----	862-868,	systems-----	15150
2454-62, 4850-62, 6844-60,		extension agent-----	20930
8811-33, 10691-706, 12552-556,		Foreign Service USIA-----	3179
14372-390, 15983-987, 18169-		forestry-----	7933
187, 19824, 21066-92.		Housing and Home Finance	
Obratsov, Nicholas S., neotropical		Agency-----	19808
Microlepidoptera, 5, synopsis		Internal Revenue Service-----	4833
of species of genus <i>Proeulia</i>		estate tax examiner-----	4834
from Central Chile-----	21802	revenue agent-----	4840
O'Brien, Donough, galactosemia, se-		revenue officer-----	4841
lected bibliography-----	4358	special agent-----	4842
O'Brien, William, effects of yttrium		tax technician-----	4844
and rare-earth-metal additions		tax work-----	2445
on electrorefined vanadium-----	21718	medical technologists and tech-	
Obscene matter:		nicians-----	5744
sent through mail, protect postal		Navy officers, information hand-	
patrons-----		book-----	16794
hearings-----	2118, 13040	nursing among American In-	
report-----	13938	dians-----	3112

# JANUARY-DECEMBER

	Entry
Occupations—Continued	
career opportunities—continued	
nursing at Clinical Center, NIH	14949
Public Health Service—	
medical services	20745
psychiatry	14947
public welfare—	
search for young and imaginative staff for summer work experience	9886
summer work experience for college students	9885
safety officers, Army Department and other Federal agencies	8162, 19328
scientific, Agricultural Research Service	5839
soldier's career, Army pamphlet	17402
stenographers and typists in General Services Administration	795
trades and crafts in Federal agencies	13805
Treasury enforcement agent	9863
Veterans Administration—	
career occupational series	7831
dietitians	1695
practical nursing	16906
Washington, D.C.	9373
characteristics, data on age, race, etc., census of population, 1960	193
clerical, for women, today and tomorrow	20884
collecting information by use of mark-sense cards	15233
data from 1960 census by State, health manpower source book	5653
enrollment in selected trades and industrial occupations, 1963	10462
Federal position classification plan	3566
foreign languages and your career	20444
hazardous, prohibitions for 16- and 17-year-old persons, comparison of State and Federal orders	7367
job horizons for college women in 1960's	15175
lifetime mobility of adult males	10063
man, medicine, and work, historic events in occupational medicine	7699
mental health career development program, conference proceedings	11448
Navy, manual for civilian guidance counselors, etc.	7645
outlook—	
handbook	2961
publications, list	9708
quarterly	3809
repairman or mechanic, career information	20449
social science and your career	20446
social security	7732
State safety and health legislation, summary	11263, 14674
see also Employment—Work—also names of occupations, industries, etc.	
Ocean:	
accumulation coefficients of $P^{32}$ , etc. in organisms, USSR study	10847
climatic review	3707
discriminatory freight rates and balance of payments hearings	6190, 10149, 19435
ice, growth, structure, and strength	21277
infrared radiation, interpretation in terms of its boundary layer	13329
investigation of world of the ocean, USSR plan	21486

	Entry
Ocean—Continued	
marine meteorological observations, manual	9878
mineral by-products from sea	10675
new 4-ocean challenge, role of Navy and Marine Corps Team	15015
pollution by oil, international convention for prevention, amendments, report	10366
pollution, protection against, regulations, USSR	7117
radioactive contamination of seas and oceans, USSR study	18305
radiochemical and ecological studies, USSR	18289
sea slicks, constitution and chemical properties, Bay of Panama	7650
sound-scattering layers, USSR study	10894
vertical transfer of waters, USSR study	10810
see also Sea water—Waves—also name of ocean.	
Ocean Breeze Project, diffusion program, data, etc.	5871
Ocean currents:	
tidal, surveys by photogrammetric methods	4407
use of EMIT in arctic waters, USSR study	10914
Virginia Beach, Va., nearshore tidal and nontidal currents	12342
Ocean stations, see Weather stations.	
Ocean temperature, northeastern Pacific, thermal regime data	11229
Oceania:	
contributions to hydrology of Asia and Oceania (series)	815, 12518, 15955, 21358
food balances, 1959-61	17909
market indicators for Oceania	14372
Oceanographers:	
employment outlook	9385
examination announcement, amdt.	6080
Oceanographic Office, publications, prices, increase, hearing	17866
Oceanography:	
Bering Sea and Indian and Pacific Oceans, oceanological studies, USSR	10933
computer programs	21811
expeditions, USSR studies	7057
Ladoga precision depth recorder, use in research, USSR study	10937
measuring natural electrical field at sea, USSR study	12946
Narragansett Bay, physical studies, 1957 and 1958	2343
National Oceanographic Data Center—	
introduction	9670
publications	9670-72, 21811
national oceanographic plan, 1963-72	8535
national program, 1964	8536
national program, 1965	8539
hearings	15598
North Atlantic Ocean station—	
Delta, 44° N, 41° W, observations	13815
Echo, 35° N, 48° W, observations	13814
North Pacific, Feb.-Apr. 1962	10576
northeast Pacific albacore survey, 1961	4741
northeastern part of Indian Ocean, structure of bottom of basin, principal features, USSR study	10806
observations, development of mechanization and automation of processing, conference, USSR	10893
oceanographic cruises, NODC fully processed, list	14091



# INDEX 1964

	Entry		Entry
Oceanography—Continued		Officers, see Boards of inquiry—Pay, allowances, etc.—Safety officers—also names of services to which officers belong.	
oceanographic reports, 11961, 13814-815		Offices, cutting office costs in small plants	13446
oceanographic ship operating schedules, 1964	8537	Official gazette of Patent Office	3810
oceanographic vessels of the world	9671-72	Oford, Harold R., diseases of Monterey pine	19750
Pacific Ocean, computation of S <sub>2</sub> tidal component on BESM-2 electronic computer, USSR study	957	Ogata, Akio, mathematics of dispersion with linear adsorption isotherm	19785
physical and chemical, Fish and Wildlife Service papers, list	18000	Ogawa, M., Rydberg absorption series of N	17004
physical, scientific works, 1960-62, USSR	5339	Ogilbee, William, ground water in Sirte area, Tripolitania, United Kingdom of Libya	6824
red-tide organisms, Gymnodinium breve, etc., from Florida west coast, 1960-61	4745	Ogilvie, K. W., detector analyzer for studying interplanetary plasma	7520
research, equipment and techniques, USSR studies	14409	Oglala Indians, Oglala Sioux Tribe of Pine Ridge Reservation, convey lands in trust to, laws	246, 249
submarine research, new trends in development, USSR study	5315	O'Hara, G. J.: elements of normal mode theory	13330
university curricula, 1963-64	8538	numerical method for transient response of nonlinear systems	5589
USSR Marine Hydrophysical Institute, activities	10765	O'Hare, John J., auditory abilities in pitch and loudness	5462
vessels, exempt from inspection laws, report	15733	Ohio: and adjacent States, floods, Jan.-Feb. 1959	12525
western north Atlantic Ocean and Gulf of Mexico	6704	annual survey of manufactures, 1962, standard metropolitan statistical areas and large industrial counties statistics	6027
Oceanology, see Oceanography.		climatological data	3329
Ocmulgee National Monument, general information	7613	district judgeship, make permanent for northern district, report	17736
O'Connor, Charles M.: industry wage survey—cotton textiles, May 1964	20437	farm vacation enterprises	14168
laundry and cleaning services, June 1963	16607	Great Lakes area, fishery products, wholesale dealers, list	729
Octal codes, see Electronic computers.		labor organizations, reporting, register	16572
Ocular damage, see Eyes.		landings, fishery products	3814, 6699
Odar, Fuat, forces on sphere accelerating in viscous fluid	15865	minerals industry, minerals yearbook chapter	2986
Odell, Thomas M., white-pine cone beetle	18043	municipal waste facilities, 1962 inventory	3105
Oden, Joe C., relief	12039, 15638, 17179	municipal water facilities	18910
Oden, Laurance L., hafnium-tantalum equilibrium diagram	18703	natural resources	2442
Oecophoridae, see Gonionota melobaphes Walsingham.		precipitation data, hourly	3578
OEDP, see Redevelopment (city planning, etc.).		Pymatuning Lake compact, amend rel. to use of motorboats, consent of Congress	
Oerlein, Karl F., radiological emergency procedures for non-specialist	1786, 15291	law	15388
Of prisons and justice, selection of writings of James V. Bennett	12166	reports	10230, 14081
Off the job safety as element of total safety (remarks)	14681	women	
Office buildings, Tangier, Morocco, construction for Consulate General, GAO review	10614	family and property law, summary	7860
Office employees, Federal office assistant examination, what it is and how given	1845	labor laws, summary	11725
Office furniture and equipment: Federal item identification guides for supply cataloging	12296	Ohio County, W. Va., coal, preparation characteristics	14746
supplements	3477	Ohio River and Valley, surface water records of basin, Oct. 1950-Sept. 1960	12522
office machines, current industrial reports	15310	Ohio River Division Laboratories, technical reports	4670, 12352, 14207-208, 17950
shipments by manufacturers, current industrial reports	165	Ohio State University, rhegoniometer, duty-free entry	14089, 17230, 17580
unnecessary procurement by Air Force Dept., GAO report	2409	Ohman, John H., white trunk rot of hardwoods	18045
Office machine operators, employment outlook	9415	Ohmmeters: digital, description	21751
Office machine servicemen, employment outlook	9432	ZM-1/U, ZM-1A/U, ZM-1B/U, instrument calibration procedure, technical manual	13361
Office machines, see Office furniture and equipment.		Oil, see Oils—Petroleum.	
Office space, Kennedy, Jacqueline B., provide, law	1924	Oil fields, see Petroleum.	
Office supplies: and devices, Federal item identification guides for supply cataloging	12296	Oil Import Administration, press releases	3911
supplements	3477	Oil pipe lines, see Pipe lines.	
		Oil refineries, see Petroleum refineries.	
		Oil sand, see Sandstone.	

# JANUARY-DECEMBER

	Entry		Entry
Oil shale:		Oklahoma City, Okla., occupational	
deposits in U.S., potential of nuclear explosives as stimulant for hydrocarbon production	13110	wage survey	1379, 21671
Green River, oil yields of sections in Utah, 1952-62	11326	Okwit, S., design of molecular amplifier group	7959
Kentucky's New Albany formation, specific-gravity to oil-yield relationships	20507	Old age, <i>see</i> Aged—Gerontology.	
mining, Rifle, Colo., 1944-56	21684	Old-age and survivors insurance, OASI series	1584-88,
technology, review	14737	3121-32, 5687-88, 7735-37, 9770-78, 11608-610, 13452, 15083-85, 16861, 18947, 20797-798, 21872-875.	
Oil wells, <i>see</i> Petroleum.		<i>see also</i> Old age, survivors and disability insurance.	
Oils:		Old age assistance:	
bacteria of layer waters, oils and rocks of oil deposits in USSR	2589	cases, specified types, monthly cost standards used by States, Jan. 1963	10496
content of corn inbred lines	7895	money payments to recipients, Oct. 1963	14215
current industrial reports	3390, 10051	program facts	12356
derived from coals, optical activity, determining content in cottonseed, evaluation of rapid method	1723	recipient rates and average payments in counties of U.S., June 1960	10498
economic potential of soaps, detergents, and surfactants	10455	State public assistance plans under social security act, staff development provisions	12355
edible, market potentials	11771	Old-age insurance, social security rulings	4040
fats and oils situation	3462	<i>see also</i> Old-age, survivors and disability insurance.	
Federal item identification guides for supply cataloging	12294	Old-age, survivors, and disability insurance:	
supplements	3475	benefits by income class	15086
Federal supply catalog—		benefits reduced, for retired workers under 65 years of age	21876
identification list, change	15829	disability applicants under program—	
management data list, change	4601, 14161, 15830	1961	13450
foreign agriculture circulars	3520	1962	16860
<i>see also</i> Fuel oil—Lubricants.		financing your social security benefits	1586
Oilseeds, and oilseed products and marine oils, prospects for foreign trade	6738	long range cost estimates under 1956 amendments	9769
Ojibwa Indians, <i>see</i> Chippewa Indians.		Maine and Texas retirement systems, coverage—	
Oka River, contamination and self-purification, USSR study	20217	law	13898
Okanogan County, Wash., Bald Knob quadrangle, geology	18108	reports	8308, 12232
Okanogan-Similkameen division, <i>see</i> Chief Joseph Dam project.		Nevada to divide retirement systems—	
Okefenokee National Wildlife Refuge, reptiles, amphibians, and fishes, list	19733	law	17241
Okey, R. W.:		reports	8304, 12229
effects of miscellaneous wastes on mesophilic activated sludge, soaps, detergents, and vomitus	20973	service area directory	1590
miscellaneous wastes effects on mesophilic activated sludge		social security law provisions, general explanation	13452
cellulose	15240	social security rulings	7742
Okinawa, southern, smaller Foraminifera from late Tertiary	10645	women, Social Insurance and Taxes Committee report	1545
Oklahoma:		your social security, basic information	3131, 9772, 21874
annual survey of manufactures, 1962, standard metropolitan statistical areas and large industrial counties	6031	Old River, control structures and navigation lock	18714
climatological data	3329	Older American veterans	15143
electric rate book	670, 19698	Older Americans, Advisory Committee on, <i>see</i> Advisory Committee on Older Americans.	
labor organizations, reporting, register	16573	Older workers, <i>see</i> Labor.	
minerals industry, minerals yearbook chapter	2987	O'Leary, Timothy J., periodontal examination systems	15239
Mississippi River and tributaries fishery products, wholesale dealers, list	732	Oleate, adsorption on fluoride and barite, effect of fluoride, sulfate, and chloride ions, infrared study	11319
municipal waste facilities, 1962 inventory	3107	Ollitoriside, <i>see</i> Glycosides.	
municipal water facilities	18912	Oliver, W. B., snow surveys for Alaska	4038
Osage pasture report	16881	Oliver, William A., Jr., Devonian colonial coral genus <i>Billingsastraea</i> and its earliest known species	4798
precipitation data, hourly	3578	Olmsted, Frederick L., papers in Library of Congress, register	1390
public assistance, federally aided programs, excessive financial participation, Welfare Administration, Health, Education, and Welfare Dept., GAO report	6764	Olsen, Carl D., dairy cattle feeding practices	9720
public school finance program, 1962-63	594	Olsen, Donald A., relief of estate	17495
sulfur, resources and production	20475	Olsen, Genevieve, relief	15651
weather stations, decadal census	15162		
women workers, 1960	13555		

# INDEX 1964

Entry	Entry
Olsen, Kenneth L., oxygen and carbon dioxide levels for storage of Delicious apples.....	9949
Olsen, William A., jr., integrated hot wire-stillwell liquid level sensor system for liquid hydrogen and other cryogenic fluids.....	1474
Olson, Leonard: occupational wage survey— Des Moines, Iowa.....	13061
Minneapolis-St. Paul, Minn.....	11280
Rockford, Ill.....	16593
Olszewski, George J., restoration of Ford's Theatre.....	7614
Oltman, R. E., Amazon River investigations.....	6801
Olympic Association, <i>see</i> United States Olympic Association.	
Olympic Committee, <i>see</i> United States Olympic Committee.	
Olympic games: Armed Forces participation, increase expenditure ceiling— hearing.....	6496
report.....	328
Olympic National Forest, report, 1962.....	2371
Olympic National Park, general information.....	3063
Olympic Peninsula, northern, Foraminifera.....	8766
Omaha, Nebr.: occupational wage survey.....	7403
post office dedication (address).....	20720
OMAT, <i>see</i> Manpower, Automation and Training Office.	
OME, <i>see</i> Minerals Exploration Office.	
Omidvar, Kazem, theory of 2s and 2p excitation of hydrogen atom induced by electron impact.....	13220
Omnirange: VHF equipment, maintenance evaluation, FAA handbook.....	12382
VOR, airborne receiving equipment for air carrier aircraft, technical standard order.....	4684
On mechanics of tornado.....	11695
Onaga, Ryotet, basic data on economy of Ryukyu Islands.....	864
Oncogenic properties of viruses, USSR.....	16559
Oncology, clinical, problems, translations.....	21494
Oncorhynchus, <i>see</i> Salmon.	
Oncorhynchus gorbusha, <i>see</i> Salmon.	
Oncorhynchus nerka, <i>see</i> Salmon.	
100 years after, newsletter of Civil War Centennial Commission.....	3815
One-third of a nation, report on young men found unqualified for military service.....	7678
One-trial learning and quantum psychophysics, synthesis.....	15006
O'Neal, Boyd B., Jr., salaries of white-collar workers in Hawaii, Puerto Rico, and Alaska, May-June 1963.....	7415
Onions: Botrytis neck rot, relationship of fungicides and field spacings, stocks, Jan. 1, 1964.....	20900
5713, 9843	
Ontario, Calif., occupational wage survey.....	5437, 21673
Ontogeny, problems, USSR study.....	20101
Oocytes: frogs— localization of nucleoproteids, detection by means of ultraviolet and luminescent microscopy, USSR study.....	5007
nuclear structures, investigation, USSR study.....	5269
Oocytes—Continued sturgeon, metaphase of 1st maturation division, USSR study.....	1240
Oospores, tobacco mildew, Bulgarian studies.....	1000
OP series.....	5622, 7657-58, 13350
Open market policy process.....	4716
Open pit mining, <i>see</i> Mines and mining.	
Open-space land program guide.....	20868
Operating engineers: employment outlook.....	9424
national apprenticeship standards, 1963.....	5923
Operating history of U.S. nuclear power reactors.....	15288
Operation and maintenance equipment and procedures, release, Reclamation Bureau.....	3822
Operation Bren (evaluation of radiation doses received by persons exposed to nuclear weapons).....	4294
Operation Chlorine, Public Health Service report.....	5663
Operation Hardtack (nuclear effects test).....	5992
Operation Upshot-Knothole (thermal radiation and blast effects).....	131
Operations (surgical), <i>see</i> Surgery.	
Operations against guerrilla forces.....	1394
Operations against guerrilla units.....	16619
Operations Nougat and Storax, in situ stresses in rock, Rainier Mesa, Nevada test site.....	19256
Operations research analysts, <i>see</i> Research analyst.	
Operator variance in determination of plastic limit.....	8508
Ophthalmology: beta-radiation therapy, USSR study.....	20206
Vietnamese, translations.....	7315
Opinions, <i>see</i> names of courts, etc., rendering opinions.	
Opisthobranchia, Ripley, Owl Creek, and Prairie Bluff formations.....	18125
Opium: regulations.....	21724
traffic, 1963.....	16651
Opium poppy, <i>see</i> Poppies.	
Oppegard, Blanche E., international petroleum trade.....	3609
Opportunities for postdoctoral research in physical and mathematical sciences at National Bureau of Standards.....	1495
Optical analyzers: strain on visual analyzers, USSR study.....	11212
structural changes in visual analyzer of monkeys after extirpation of cervical lobes, USSR study.....	12757
Optical anisotropy and conformation of molecules of soluble (transfer) ribonucleic acid (S-RNA), USSR.....	12801
Optical equipment, <i>see</i> Optical instruments and apparatus.	
Optical illusion, <i>see</i> Distortion.	
Optical instruments and apparatus: design, military standardization handbook.....	561
tooling scale, instrument calibration procedure, technical manual.....	11524
wide-angle overlapping monoculars for providing pilot's field of vision.....	9610
Optical measurements: onboard, to determine position and velocity of spacecraft in earth-moon space regions.....	18774
long line azimuths of ANNA flashing satellite.....	19150

	Entry
Optical mechanics, <i>see</i> Mechanics (persons).	
Optical quantum oscillators, <i>see</i> Lasers.	
Optical techniques:	
high density optical memory drum.	11783
temperature and concentration measurements of combustion in supersonic streams.	18769
Optical tooling scale.	11524
Opticians, employment outlook.	9425
Optics:	
atmospheric—	
and actinometry, USSR 5th inter-departmental conference on.	7323
selected articles, USSR.	14909
classification bulletin.	20716
micromachining produces optical apertures to micron dimensions.	20565
new thoughts and methods in optical planning, Hungarian study.	1233
optical activity in oils derived from coals.	20501
ruby samples, tests.	13346
Optimal control, Banach spaces, essential conditions, USSR study.	18471
Optimal coplanar flight between orbits.	20623
Optimal processes:	
algorithm for optimizing manufacture and distribution of non-homogeneous production, USSR study.	9080
control—	
problem, USSR study.	14562, 16552
rocket booster.	13146
theory, problems, USSR study.	9346
estimation, space vehicle trajectories secondary errors and off-design conditions.	7528
numerical method for solving problems of optimum control, USSR study.	16314
optimization of Polish industrial development plan.	7303
Optimal strategies and human behavior in fungus-eater game 4.	11708
Optimized printer plotting system consisting of complementary 7090 (FORTRAN) and 1401 (SPS) subroutines.	11383-384
Optometrists, occupations, employment outlook.	7377
Optometry:	
student loan program, extend to—	
hearings.	15593
law.	21146
reports.	17547, 17760, 19459
Oral cancer, <i>see</i> Cancer.	
Oral hygiene, <i>see</i> Mouth.	
Orange, Thomas W., tensile coupon tests of cryoformed AISI stainless steel pressure vessels at cryogenic temperatures.	21763
Orange juice, frozen concentrated, standards for grades.	19049
Oranges, Florida, forecasting quality and pounds—solids.	9911
Orbiting Astronomical Observatory, ground operation equipment.	3007
Orbiting Radio Beacon Ionospheric Satellite, <i>see</i> Satellites.	
Orbits:	
celestial bodies, motion, simultaneous computation of secular and resonance effects.	13223
elliptic, central force laws.	13636

	Entry
Orbits—Continued	
interplanetary missions—	
high-energy chemical stages performance analysis.	5507
utilizing 1st-generation nuclear stages, parametric performance analysis.	21759
low-thrust orbit raising in continuous sunlight.	9567
lunar—	
element control with potential applications to manned space missions.	11391
orbit-rendezvous mode and abort situations, analytical study of lunar landing trajectories.	3015
transfer ephemeris deviation, technique.	21747
100-hour, and longer, man's trainability for, USSR study.	10928
optimal coplanar flight between orbits.	20623
periodic, in three-body problem, series solution.	20611
precessing near-earth parking, determining nodal arrival times at noon.	18770
satellites—	
computation by Hansen method as modified by Musen.	5524
long range effects caused by moon and sun.	9618, 14902
Vinti's theory, determination of mean elements.	13237
visual binary, catalog.	9669
Orchards, apple, young, establishing and managing.	15208
Orders, <i>see</i> names of departments, etc., issuing orders— <i>also</i> subjects.	
Ordinal ranking, <i>see</i> Rank order.	
Ordman, Arnold:	
addresses, etc.—	
Feb. 18, 1964.	7591
Feb. 21, 1964.	7593
Apr. 24, 1964.	11456
June 5, 1964.	13290
Ordnance pamphlets, Naval Weapons Bureau.	5622, 7657-58, 13350
Ordnance Tank Automotive Command, appropriations, 1965, military construction, hearings.	12118
Ordovician period, fossils in Ordovician tuffs, northeastern Maine.	14338
Ore flotation, <i>see</i> Flotation.	
Oregon:	
annual survey of manufactures, 1962, standard metropolitan statistical areas and large industrial counties, statistics.	8104
area measurement report.	17073
BLM at work.	13089
Christmas tree harvesting and marketing regulations.	16586
climatological data.	3329
coast pilot.	1850
coastal dune sands for use as glass sand, beneficiation studies.	16635
eastern—	
forest resources.	8696
logging residue, characteristics of sample.	12464
upper Jurassic mollusks.	15952
electric rate book.	2323
fishery products, wholesale dealers, list.	722, 18020
labor organizations, reporting, register.	16574
landings, fish and shellfish, annual summary, 1963.	10549
miocene marine mollusks from Astoria formation.	4790
mineral industry, minerals year-book chapter.	21704



# INDEX 1964

	Entry
Oregon—Continued	
municipal waste facilities, 1962 inventory	3109
municipal water facilities	18914
natural resources	15973
north-central John Day formation, geology	4778
northwestern, geologic sketch and interpretation of surveys	18112
Pacific slope basins—	
floods, magnitude and frequency	4818
surface water quality	6811
precipitation data, hourly	3578
snow survey measurements, 1928–61 summary	3136
stroke rehabilitation program, in-service training for care facility personnel	11561
surface water records, Oct. 1950–Sept. 1960	4822
water supply outlook and snow survey	4142
weather stations, decadal census—	
western, timber trends	16920
S6883	
Oregon Dunes National Seashore, establish report	500
Oregon State University, mass spectrometer, duty-free entry	8310, 14049, 17280, 17580
Orem, Utah, consumer expenditures and income, 1961	11271
Ores:	
and primary products, Federal item identification guides for supply cataloging	12295
supplements	3476
deep ore concentration process is making slow progress, USSR study	18408
deposits—	
Belo Horizonte, Ibirité, and Macacos quadrangles, Minas Gerais, Brazil	10638
Bokan Mountain, uranium-thorium area, southeastern Alaska	6798
Coeur d'Alene district, Shoshone County, Idaho	15948
geology of zones, USSR studies	16084
grade estimating for bedded deposits, using unequal sample interval lengths, etc.	9523
metal content and tonnage, estimating from diamond-drill-hole data	9502
Polymetallic, conditioned, translations	20287
titaniferous fluidized-bed chlorination	1436
see also Assaying—also names of metals or minerals.	
Oresund, sailing directions, change	11476
Organ Pipe Cactus National Monument, general information	3064
Organic acids, composition, USSR study	20255
Organic chemistry:	
Bulgarian Academy of Sciences Institute, tasks	7187
Research Institute of Hungarian Organic Chemical Industry, activities	14514
Organic compounds:	
fluorinated, surface activity adsorbed at organic-liquid/air interfaces	5601
possibility of existence on moon—	
synthetic organic chemicals—	
production and sales, 1962	1626
U.S. production, preliminary report	3864
Organic matter, primary production of bodies of water, errata	11852

	Entry
Organisms:	
biological-like structures, USSR study	1285
chemical agents effects on living matter, USSR study	9324
human, physiological mechanisms and methods of study, USSR studies	10803
marine, cytochemical studies of early stages, USSR	4901
organization of life, general principles, USSR study	12800
resistance to action of toxic substances, USSR study	7135
Organization charts:	
Air Force	3236
Army Department	3569
Federal executive departments and agencies	8446
Food and Drug Administration	18041
Organization of African Unity, summit conference in Cairo	20062
Organization of American States, Inter-American Economic and Social Council, report of first annual review of alliance for progress	4496
Organizations:	
community, focus on clean water, action, program	13397
contributions to which are deductible for income tax purposes, list supplements	3388
nationally recognized accrediting agencies and associations designated by Commissioner of Education	15853
scientific—	
Ukrainian SSR, translations	2540
USSR, translations	2707
U.S. selected private organizations special activities, impact abroad, hearings	4497
USSR meteorological and hydrological, plans and meetings	2746
see also Societies.	
Organized crime, see Crime and criminals.	
Organophosphorus compounds, insecticides, toxicity, Rumanian study	10849
Organosilicon compounds, synthesis and physico-chemical properties, research	5918
Organs:	
animal, evolution and adaptation, USSR studies	21415
internal, nonpolarizing electrodes for detecting slowly varying biopotentials	9627
lost, regenerative processes	4263
rabbits, internal, morphological changes from local ultrasonic irradiation, USSR study	1030
Oriental art, see Art.	
Orientation:	
accuracy in homogeneous environment, effects of stimulus and field size	20701
new employees in Branch of Education, Indian Affairs Bureau	835
Orifices:	
axial, numerical solutions of Knudsen flow entering circular tube through	7521
elastic, automatically regulates gas bearings	14800
Ornamental hedges, see Hedges.	
Ornamental shrubs, see Shrubs.	
Orne, Lawrence E., instantaneously-responding expansion amplifier, method and device for signal enhancement in noisy communications systems	16994
Ornithology, see Birds.	

# JANUARY-DECEMBER

Entry	Entry
Ornithosis, <i>see</i> Psittacosis.	Oscilloscopes:
ORNL, <i>see</i> Oak Ridge National Laboratory.	circuit applications..... 20689
Orography, considerations on hydrodynamic forecasting of pressure fields in mid-level of atmosphere for entire sphere of earth, USSR study..... 6884	Dumont 304H, instrument calibration procedure, technical manual..... 11512
Oroville, Calif.: land conveyance—	Dumont 401A or 401AR, instrument calibration procedure, technical manual..... 11515
law..... 17246	general purpose, instrument calibration procedure, technical manual..... 11514
reports..... 367, 14114	Hewlett-Packard 122A and 122AR, instrument calibration procedure, technical manual..... 11516
Orr, Mercedes R., relief..... 238	OS-34/USM-32, instrument calibration procedure, technical manual..... 11513
Orr, P. W., windthrown timber survey in Pacific Northwest, 1962..... 15937	Osgood Mountain quadrangle, Nev., geology and mineral deposits..... 8768
Orr, Robert L.: occupational wage surveys—	Oskey, Rollo, relief..... 15618
Albuquerque, N. Mex..... 16594	Osmosis:
Denver, Colo..... 9467	reverse—
Los Angeles-Long Beach, Calif..... 16592	desalination mechanism..... 6835
Phoenix, Ariz..... 14696	desalination pilot plant design..... 6836
Portland, Oreg.-Wash..... 16600	Osmotic stability in persons subjected to action of some occupational hazards, USSR..... 2490
Salt Lake City, Utah..... 9461	Osseous tissue, <i>see</i> Bones.
San Bernardino - Riverside - Ontario, Calif..... 5437	Osteopathic physicians, employment outlook..... 13050
San Diego, Calif..... 7402	Oswego, N.Y., principal electric facilities, map..... 673
San Francisco-Oakland, Calif..... 11277	Oths, Florence V., teaching to meet challenges of space age..... 7569
Seattle, Wash..... 7399	Otis, Jack, speech, Nov. 5, 1963..... 5762
Spokane, Wash..... 18636	Otolaryngology, labyrinthine efferent impulses in frog..... 4259
Orthopedic disabilities, <i>see</i> Disabled.	Otoliths, role in taxonomic analysis of fish, USSR study..... 4979
Orthopedics:	OTS, <i>see</i> Technical Services Office.
all-Union conference of traumatologists-orthopedists, resolution, USSR..... 12883	Otter trawls, <i>see</i> Trawls and trawling.
gerontology and geriatrics, problems, USSR study..... 20002	Otterson, Dumas A., carbonate impurity in surface region of sodium chloride crystals..... 18762
Ortiz, Alfred, basic data on economy of Dominican Republic..... 18177	Otton, E. G., water resources of Baltimore area, Md..... 8775
Orton, Robert B., climate of Texas and adjacent Gulf waters..... 15151	Otto, Louis E., jr., water requirements of petroleum refining industry..... 813
Osage Indians:	Ouachita County, Ark., geology and ground-water resources..... 12528
mineral reservation, extend for indefinite period—	Ouachita River:
law..... 21124	engineer report—
reports..... 17571, 17841	departmental edition..... 17951
Osborne, M.F.M., interpretation of infrared radiation from sea in terms of its boundary layer..... 13329	document edition..... 17458
Osborne, Thomas S., atoms in agriculture, applications of nuclear science to agriculture..... 136	Oudine, John A., all hands, Naval Personnel Bureau career publication..... 3249
Osburn, Hobart G., validation of carefulness test battery against training school criteria..... 13633	Ouellette, Stanislaw, relief..... 291, 6150, 6303
Oscillation, <i>see</i> Multivibrator.	Our American way of life..... 12535
Oscillations, fluid, in containers of space vehicle, influence on stability..... 7560	Our citizenship, troop topics..... 17043
Oscillations (electric): excitation of electrostatic oscillations in magnetic field..... 13698	Our country, troop topics..... 15269
Oscillators:	Our flag..... 4429
bridge, general radio 1330-A, instrument calibration procedure, technical manual..... 11502	print additional copies of House document, reports..... 6314, 8422
dial type, instrument calibration procedure, technical manual..... 11503	Our Government, troop topics..... 8033
dual (redundant) system, increased reliability..... 9544	Our heritage of elements (address)..... 19261
frequency tracking square wave, analysis..... 20619	Our Lady of Lourdes Memorial Hospital:
quartz composite, construction, etc..... 11325	claim—
radio frequency SG-404/UR or Panoramic Radio Products RF-7a RF, instrument calibration procedure, technical manual..... 11501	law..... 1946
square wave, operates at high power levels..... 13198	report..... 4531
test oscillator TO-258 and TO-100, instrument calibration procedure, technical manual..... 11504	Our United States..... 14360
<i>see also</i> Lasers.	Outdoor cookery, <i>see</i> Cookery.
	Outdoor recreation, <i>see</i> Recreation.
	Outdoor Recreation Bureau:
	development of recreational opportunities, etc. (remarks)..... 5629
	Federal focal point in outdoor recreation..... 20714
	press releases..... 3912
	publication series..... 9689
	statistical series report..... 7667

# INDEX 1964

	Entry
Outdoor Recreation Resources Review Commission, reports, list and order form-----	3092
Outer space:	
achievements, NASA installations, activities of Federal depts., etc., investigate, authorization, report-----	7475
aerospace-----	4552
companies, backlog of orders, current industrial reports-----	3391, 11892
disturbances, research program, agreement with Australia-----	7795
information handbook-----	13625
safety (periodical)-----	3217
technology, Lewis Research Center, conference reports-----	21743
technology, positions in NASA, examination announcement, amdt-----	17130
America in space, pictorial review, code of Federal regulations-----	16657, 6651-52, 8556-57
communications center, visit to, USSR-----	12854
cybernetics use, USSR articles-----	9023
deep space optical communications systems study-----	16652
detector-analyzer for studying interplanetary plasma-----	7520
earth-moon regions, accuracy of navigation with various combinations of onboard optical measurements-----	18774
elektron space system, USSR study-----	9084
Europe and space, French study-----	1133
exploration, etc.-----	
man-in-space program, Project Mercury ballistic and orbital chimpanzee flights-----	5501
new frontier-----	5535
program, effects on urban life, conference proceedings-----	3004
USSR study-----	2507
extraterrestrial, stations, uses, etc., USSR study-----	5286
first manned group flight, Aug. 11-12, 1962, USSR-----	14613
flank losses, effects in theory of space-probe entry under conditions of high mass loss-----	1469
geophysics and space data bulletin, Goddard Space Flight Center, contributions to COSPAR meeting, June 1963-----	20967, 14854
interplanetary magnetic field, simple model-----	18745-746
interplanetary space, existence of neutral hydrogen-----	2699
investigation, USSR bibliography-----	14926
law of space and of satellite communications, conference on peaceful uses of space, proceedings-----	13157
lubrication requirements for space environments-----	4253
man-in-space, human factors system program, bibliography-----	18729
man, USSR study-----	16503
manned space missions, orbital element control with potential applications, theoretical study-----	11391
medicine and biology, bibliography-----	16668, 18728, 20539, 21744
missiles, publications list-----	18884
missions-----	
Brayton cycle space-power system applications, analytical studies-----	20610
flight-informational sensors, display, and space control of X-15 airplane for atmospheric and near-space flight-----	16712

	Entry
Outer space—Continued	
NASA educational publications, list-----	11357
NASA manned space flight team-----	9537
NASA photography from five years of space-----	7476
National Conference on Peaceful Uses of Space, proceedings-----	20538
naval surveillance system observations, decay prediction of 1963-21-----	20712
outer space and life, USSR study-----	1269
physiology, neon solubility determination in water and extracted human fat-----	13650
power, thermionic converter, thermal and thermionic characteristics-----	9619
radiation, protecting human beings, USSR study-----	7082
radioactive contamination, hygienic problems, USSR study-----	7060
research-----	
East European journals, abstracts-----	984, 1174, 1216, 1308, 1345, 2781, 2840, 4966, 5070, 5232
facilities, training, and research grants programs of NASA, hearings-----	4568
investigation, expenses, report-----	12071
scientific and technical aerospace reports-----	4011
announced, contract number index-----	9541
cumulative indexes-----	4010
subject indexes, guide-----	13138
space-oriented mathematics for early elementary grades, education aids-----	19625
space, the new frontier-----	21739
Soviet bloc research-----	4044
United States space activities, report 1963-----	5537
departmental edition-----	4434
document edition-----	6971
USSR, new investigations-----	16383
USSR research, 5 years-----	102
ventures into space, progress report, 1962-63, Army pamphlet-----	16677
waste heat rejection, moving-belt radiator system, heat transfer and weight analysis-----	11980
weatherman in space-----	
what's up there, source book in space oriented mathematics-----	7570
student edition-----	7571
teacher edition-----	7472
X-15 research at edge of space-----	
see also Life support systems.	
Outlying possessions:	
housing census detailed data-----	1806
talent development personnel and activities-----	21273
United States trade-----	3535
Outpatient services, see Clinics—Hospitals.	
Output power from gas lasers at room temperature-----	19175
Overbeck, John G., relief-----	6261, 10392, 13841
Overbeck, Mary G., relief-----	6261, 10392, 13841
Overhelm, Richard K., Baton Rouge wholesale food-distribution facilities-----	11737
Overland train, Mark II, dust concentration measurement-----	16894
Overlays for lumber, old product in new dress-----	14311

	Entry		Entry
Overseas business reports-----	862-868,	Oxygen-Continued	
2454-62, 3827, 4850-62, 6844-		detonation wave formation in	
60, 8811-33, 10691-706, 12552-		stoichiometric hydrogen-oxygen	
556, 14372-390, 15983-987,		mixture, high-speed photo-	
18169-187, 19824, 21066-92.		graphic investigation-----	11393
Overseas service:		detonation waves formation in	
American social workers, opportu-		hydrogen-oxygen mixture-----	9604
nities overseas-----	11710	effect of flammability of lip, face	
Federal jobs-----	4391	and hair preparations-----	13729
learning to live overseas, Army		effect on properties and heat treat-	
pamphlet-----	13676	ment of titanium alloy VT 14-----	4909
Overstreet, William C., heavy min-		generation and carbon dioxide re-	
erals in saprolite of crystal-		moval aboard submarines,	
line rocks, Shelby quadrangle,		sulfate cycle-----	13340
N.C-----	2418	levels for controlled-atmosphere	
Overtime, see Hours of labor.		storage of apples-----	9949
Overton, Robert O., and wife, re-		liquid-----	
lief-----	21172	friction, wear, and dynamic seal	
Ovomucoid, see Glycoproteins.		studies-----	18779
Owen, Margaret R., relief-----	10371	S-IV all systems vehicle explo-	
Owen, R. W., jr., northeast Pacific		sion-----	20567
albacore oceanography sur-		physiologic effects of exposure to	
vey, 1961-----	4741	increased oxygen tension at 5	
Owen, Vaux, jr., geology and ground-		p.s.l.a-----	5895
water resources of Lee and		production by algae-----	
Sumter Counties, Ga-----	2432	for nuclear submarines-----	5602
Owens, Charles D., shade and water		in small culture unit, factors af-	
for honey bee colony-----	15210	fecting-----	5611
Owens, Hugh F., nomination, hearing,		prolonged exposure at total pres-	
Owl Creek formation, see Cretaceous		sure of 190 mm. Hg., effects	
period.		on man-----	71
Owsley, Alice, sources of information		radiolysis, ozone formation-----	5965
on financial aid for professional		ratio to metal in solid solutions of	
preparation for educators of ex-		uranium and plutonium di-	
ceptional children-----	6580	oxides, measurement-----	8054
Owsley County, Ky., opportunities for		removal by enzymatic action, new	
economic growth-----	19197	concept of corrosion preven-	
Owyhee County, Idaho, ground-water		tion-----	1533
reconnaissance of Sallor Creek		settling time of fixed amount in	
area-----	15944	atmospheres of planets con-	
Oxidation:		taining water vapor-----	1480
anthracite, with nitric acid, prod-		speech during respiration of mix-	
ucts obtained-----	20509	ture of helium and oxygen-----	5469
anti-oxidation properties of poly-		spontaneous chain ignition with hy-	
phenols, USSR study-----	7343	drogen in shock waves, USSR	
effects on performance of charring		study-----	14444
ablators, determination-----	13256	tensions, low, cellular oxygen	
electrochemical, of titanium di-		consumption-----	5896
boride-----	16715	thermodynamic and transport	
fatigue and high-temperature		properties for hydrogen-oxygen	
alloys, USSR study-----	12783	system-----	18727
high temperature, niobium in ultra-		titanium reactivity-----	16722
high vacuum-----	8085	toxicity-----	
resistant coatings-----		space-cabin atmospheres, general	
diffusion, effects on Mo-0.5 Ti		information-----	20536
molybdenum alloy at 2,500° F.		time-concentration effects in man-	
studies-----	18732	transfer during photosynthesis,	
for tantalum alloys and other		participation of xanthophylls,	
metals-----	48	USSR study-----	12861
thermal, high polymers, literature		use, with steam, for gasification of	
survey-----	4608	coal-----	7443
Oxides:		Wright's interpretation of temporal	
refractory, evaluation for use in		variation of O/N <sub>2</sub> ratio in	
high-temperature pebble-bed		thermosphere, notes on-----	20960
wind-tunnel heat exchangers-		Oxygen cutters, employment out-	
rock-forming, except water, phase-		look-----	7391
equilibrium relations-----	14343	Oxygen deficiency:	
surface energy-----	3038	cerebral hypoxia in response to	
see also oxides by name, e.g. Iron		gravity effects while breath-	
oxides.		ing oxygen, USSR study-----	1238
Oxygen:		training for hypoxia, effect on burn	
and the eye, toxicity effects-----	11805	sickness, USSR study-----	1253
atomic, photolionization-----	14779	USSR study-----	16474
breathing equipment, continuous		Oyama, Danny H., relief-----	15453,
functional testing-----	74		17226, 17682
chemiluminescence from atomic		Oysters:	
oxygen-nitric oxide reaction un-		certified shippers-----	3311
der upper atmospheric condi-		firms canning, list-----	747
tions-----	14780	industry-----	
content and capacity of blood, polar-		effects of pesticides, water pollu-	
ographic determination in		tion, etc., hearings-----	405
single sample-----	17014	of Chesapeake Bay, South Atlan-	
cyanogen-oxygen combustion, com-		tic and Gulf of Mexico-----	10558
position and thermodynamic		shell products, firms manufacturing,	
properties of products-----	18753	list-----	755



# INDEX 1964

	Entry
Ozark National Scenic Riverways:	
establish—	
law	17351
reports	8292, 15525
Ozark National Scenic Riverways Commission:	
establish—	
law	17351
reports	8292, 15525
Ozark region, Missouri, small-wood-land owner, close-up	12473
Ozawkie Dam and Reservoir, designate, hearing	21211
Ozone:	
absorption of atmospheric thermal radiation in 9.6 u band region	14915
attenuating components in ultraviolet region, altitude variation	19149
formation in radiolysis of oxygen-meridional distribution and total amount in atmosphere, effects of non-photochemical processes	5965
Ozonesonde observations over North America	14844
	7966
<b>P</b>	
P.A. reports	6602
	8525, 10497, 12355, 19666
P.C.A., see Production credit associations.	
P.H.S., see Public Health Service.	
P.N. series	3950
P.P.C. series	3828
P.R.L., see Personnel Research Laboratory.	
PA series	39,
	4217, 5842-54, 7937-39, 9937-62, 11776-779, 13595-596, 15216-220, 16964-968, 19100-101, 20931-932.
Pablo National Wildlife Refuge, birds, list	15922
PACAF basic bibliographies	68,
	1741, 5892, 9982
PACER, see Portable aircraft condition evaluator recorder.	
Pachycarpine, poisoning in clinical practice, USSR study	21551
Pacific area:	
climatological data	3329
PACAF basic bibliographies	68,
	1741, 5892, 9982
situation in western Pacific (address)	13466
Pacific Coast:	
Alaska, coast pilot, Dixon Entrance to Cape Spencer, supplement	4405
coast pilot	1850
coastal warning facilities chart, 1963	5755
coastal warning facilities chart, 1964	11685-686
commercial fisheries	12426
fisheries, annual summary, 1962	8595
light list	19344
shrimps of genus <i>Betaneus</i>	7608
transportation lines	6596
waterborne commerce, 1963	21281
see also Pacific States.	
Pacific Islands:	
British, economy, basic data	6846
light list	19344
lights and fog signals, list, change	13311, 18845
mineral industry, minerals year-book chapter	20491
north and south, lights and fog signals, list, change	3074
sailing directions	21812
change	3072, 16778
southwest Pacific, research studies completed, list	7752

	Entry
Pacific Islands Trust Territory, see Trust Territory of Pacific Islands.	
Pacific Northwest, see Northwest (U.S.).	
Pacific Ocean:	
airman's guide	3245
central and western, tide tables, 1965	13812
central, fish schools and bird flocks, 1950-61	15930
computation of S <sub>2</sub> tidal component for Pacific Ocean water area on BESM-2 electronic computer, USSR study	957
danger areas, DAPAC	18844
detection of upwelling and sinking of water in central part, USSR study	10895
equatorial, biostratigraphic separation of bottom sediments, USSR study	7179
lights and fog signals, list	16779
North—	
fur seals, interim convention, protocol amending, report	10362
oceanography, Feb.-Apr. 1962	10576
northeast, albacore oceanography survey, 1961	4741
northeastern—	
distribution and relative abundance of commercially important pandalid shrimps	8617
thermal regime data	11229
notice to mariners	8500
oceanology, USSR studies	10933
radio navigational aids, 1964, change	7636, 14994, 20676
radio weather aids	8075
change	13313, 21815
three new species of frogfishes	18823
Western—	
conference on joint investigations of flora and fauna, USSR study	7172
lights and fog signals, lists	9674, 21813
Pacific slope basins, see Pacific States.	
Pacific Southwest, see Southwest (U.S.).	
Pacific Southwest Forest and Range Experiment Station, report, 1963	14296
Pacific States:	
drought effects in California	808
Pacific slope basins—	
Oregon and lower Columbia River basin, surface waters, Oct. 1950-Sept. 1960, records	4822
surface water, compilation of records, Oct. 1950-Sept. 1960	19796
surface water quality in Oregon and lower Columbia River basin	6811
Washington and upper Columbia River basin, surface waters, Oct. 1950-Sept. 1960, records	14354
see also Pacific Coast.	
Pacific Tropical Botanical Garden:	
confer Federal charter—	
law	17308
reports	15526, 15694
Packages:	
gift, sending abroad, U.S. export regulations, summary	6122
power reactors in small packages	15293
Packaging:	
converted flexible products, current industrial reports	21030
frozen cut-up chicken, specified shrink films for prepackaging, evaluation	11772
industry reports	3365
materials, Federal test method standard	8590

# JANUARY-DECEMBER

	Entry
Packaging—Continued	
military supplies, etc., preservation and intermediate protection, course outlines	6545
prepackaging lettuce at shipping point	13591
prohibit unfair and deceptive methods, hearings	540
requirements code, military standards	3724, 4607, 14164
supplies, Federal item identification guides for supply cataloging	12291
see also Packing.	
Packaging Training Center, Joint Military, see Joint Military Packaging Training Center.	
Packard, R. F., superheterodyne receivers	7468
Packers, packers and stockyards act, text, regulations, and policy—see also Packing industry.	11788
Packers and stockyards resumé	3833
Packing:	
and preservation packaging of military supplies and equipment, DSA manual	12298
converted flexible packaging products, current industrial reports	3390
materials, Federal test method standard	8590
military supplies, course outline	6546
packaging and packing supplies, Federal item identification guides for supply cataloging	3472
supplies, Federal item identification guides for supply cataloging—see also names of articles packed.	12291
Packing industry:	
cattle killing-floor systems and layouts	9952
facilities and equipment fact sheet (series)	18
meat packing plants industry wage survey	13073
meatpacking and processing industries, employer expenditures for supplementary compensation practices, 1962	14706
packers and stockyards act—	
as it applies to	
auction markets	4179
livestock dealers	5788
livestock producers	4180
assists to recover losses in livestock claims	5844
text, regulations, and policy	11738
packers and stockyards resumé	3833
Packishouses, meat, panel-type wall and ceiling construction	18
Packless valve with all-metal seal handles wide temperature, pressure range	9546
Padgett, Iris C., convalescent leave from mental hospitals	8524
Padre Island National Seashore, general information	18830
Page, Louise, food and your weight	19078
Page, R. W., geology and ground-water appraisal of Naval Air Missile Test Center area, Point Mugu, Calif	2427
Page, William A., shock-layer radiation of blunt bodies at reentry velocities	9620
Pages, see Messengers.	
PAI series	8526, 12354, 14216
Paidas, Areti S., relief	1999, 6151, 6394
Palla, steel shipping, current industrial reports	3390, 8120

	Entry
Paint:	
current industrial reports	3390, 11899
durable, fireproof, alkali silicate forms	18209
engineered performance standards—	
formulas	5775
handbook	5776
Federal item identification guides for supply cataloging	12294
supplements	3475
fluorescent color specification, Beckman model DK-2 spectrophotometer	5593
products, unnecessary costs from purchase, etc., in uneconomical-size containers, Defense Department, GAO report	18094
reflective, use on rice storage bins	9909
safe use and storage on farm	9942
white epoxy, vectorial reflectance of Explorer IX satellite material	16701
Painters, employment outlook	9421
Painting, apprenticeship and training standards	20978
Paintings:	
Indian miniatures, from Archer collection, catalogue	3055
Turner watercolors from British Museum, catalog of exhibition	3056
Paints, see Paint.	
Painte Indians:	
Malheur Reservation, roll of eligible persons to receive funds from judgment—	
law	17323
reports	12084, 15779
Pakiser, L. C., gravity study of Long Valley	6804
Pakistan:	
accessions list, Library of Congress American Libraries Book Procurement Centers, Karachi and Dacca	3834
agricultural commodities, agreement	9828
cotton	2347
economy, basic data	4851
Indus Basin development fund, supplemental agreement	13477
informational media guarantees, agreement	9837
labor conditions	13077
selling in Pakistan	21088
West, land and water development in Indus Plain, report	21837
Paleontology, contributions to stratigraphic paleontology (series)	18110
see also Fossils.	
Paleozoic era:	
rocks, Hovey Group of northern Maine	19779
thorium and uranium in 3 early New Hampshire plutonic series, distribution	21350
upper Paleozoic floral zones and provinces of U.S.	8771
Palermo, Peter, see Florida, Pasquale.	
Palfrey, John G.:	
remarks	
Nov. 8, 1963	184
Dec. 5, 1963	1785
Palisca, Claude V., music in our schools	15852
Fallets (materials handling) storing fruits and vegetables in wholesale warehouses	4209
Palmer, Allison R., unusual lower Cambrian trilobite fauna from Nevada	21356
Palmer, Raymond W., coll-system design parameters for constant-velocity traveling magnetic wave plasma engine	13228

# INDEX 1964

	Entry
Palo Verde Mesa : desert lands, extend time for final proof of development— law ----- report -----	21137 19580
Palsy, <i>see</i> Facial paralysis.	
Pamphlets, copyrighted, catalog of copyright entries ----- <i>see also</i> names of departments, etc., issuing pamphlets— <i>also</i> sub- jects.	8458
Pan American games : Armed Forces participation, in- crease expenditure ceiling— hearing ----- report -----	6496 328
Pan American Highway Congress delegates, joint meeting with Committees on Public Works.	10435
Pan American Union, financing assist- ance under alliance for prog- ress, agreement.	9825
Panama : birds, additions to records ----- contribution to history of Pan- ama land bridge (series) ----- delinquent accounts receivable due Panama Canal Co., and Canal Zone Government, GAO report. ----- economy, basic data ----- evacuation of dependents of Armed Forces, payment of expenses, authorize— hearing ----- law ----- reports ----- geology and paleontology ----- housing investment guaranty and economic aid programs, staff survey team report ----- index—digest of decisions, 1949- 62 ----- national aviation regulations, translation ----- Peace Corps program, agreement ----- relations with United States, questions of sovereignty of Canal Zone, etc. ----- withholding Panamanian income tax, agreement -----	3129 6803 12488 8814 19591 19421 13937 6803 10313 19745 18422 18978 5934 1616
Panama, Bay of, constitution and surface chemical properties of sea slicks -----	7650
Panama Canal : and adjacent waters, rules and reg- ulations governing navigation. appropriations, 1965— amendment ----- hearings ----- law ----- reports ----- capacity and security, increase, hearings ----- relations between Panama and U.S. on question of sovereignty, etc. ----- U.S.S. Alabama, permit passage without toll charges— law ----- reports ----- <i>see also</i> Canal Zone.	6026 12030 12119 17370 12098, 15767, 17572 8440 5934 17279 13977, 15703
Panama Canal Co. : annual report, 1963— departmental edition ----- document edition ----- audit report, 1963 ----- delinquent accounts receivable due from Republic of Panama at Nov. 30, 1963, GAO report. ----- employees, compensation claims ap- peals— law ----- reports ----- financial statements, GAO report— improper use of funds for bridge construction, GAO report -----	19281 19449 10156 12488 17367 15517, 17731 8714 10603

	Entry
Panama Canal Co.—Continued personnel, air accommodations, 1st class, GAO report. ----- salary reform act of 1964, amend act to permit salaries of cer- tain officers to be established at amounts in excess of maxi- mum rate of grade 18 of Gen- eral schedule— law ----- reports ----- Panama Canal Review (periodical) ----- Panama Canal Zone, <i>see</i> Canal Zone. Panama, Isthmus of, final link, re- port on Darien Gap and com- pletion of Inter-American Highway ----- Pancreas : acute pancreatitis, treatment ----- human, zinc content, USSR study ----- Panek, Louis A., development of rock stress monitoring station ----- Panel of Consultants on Aging, re- port ----- Panel of Consultants on Vocational Education, report of education for changing world of work, summary ----- Panel-type wall and ceiling construc- tion ----- Panels (aircraft) : corrugation-stiffened— elastic constants for bending and twisting ----- flutter results at Mach number of 3 ----- fiberglass-reinforced sandwich structure for airframe use, research ----- flat, flutter, effects of differential pressure, thermal stress, and buckling ----- flat sandwich, edgewise compres- sive buckling ----- flutter— research ----- sandwich, curved and flat type, subjected to supersonic flow ----- rectangular, thermal stresses and deflections ----- Panels (building) : sandwich, performance in experi- mental unit ----- wood, plastic-faced, importance of balanced construction ----- Panels (display), <i>see</i> Display panels. Panhandle gas field, Tex., uranium and helium ----- Pankratz, Louis B. high-temperature heat contents and entropies of— andalusite, Kyanite, and sillima- nite ----- muscovite ----- thermodynamic data for columbium (niobium) carbide ----- Panola County, Miss., soil survey report ----- Pao, Yih-Ho, and wife, relief ----- Paone, James, drillability studies, diamond drilling ----- Papa, Robert J., nonlinear interaction of electromagnetic wave with time-dependent plasma me- dium ----- Papago Indians : relocation of village of Sil Murk— law ----- reports ----- Papathanasiou, Styliani, relief ----- Papell, Stephen, instability effect on 2-phase heat transfer for sub- cooled water -----	10598 21123 17794, 19461 3835 10343 8941 18354 21710 7853 2289 18 20618 11414 20857 3022 12442 1479, 14788 11388 4227 18080 8641 6807 7448 7449 13122 5695 12192, 17477, 19372 1442 15647 13638 17321 15492, 15778 15647 21771

# JANUARY-DECEMBER

	Entry		Entry
Paper:		Parameters:	
air pollution and draft pulping industry	15047	coil-system design, for constant-velocity traveling magnetic wave plasma engine, analytical investigations	18228
bibliography	149	earth's magnetic field and cosmic ray, equatorial loci	11799
cross sections, preparing at Forest Products Laboratory	12443	electric, of biological tissue in microwave range, USSR study	18495
current industrial reports	3390	hypersonic flow fields about blunt-nosed cylinders	14875
Government specification standards	2129, 3558, 15604, 19523	hypersonic shock-heated flow, as function of flight velocity and altitude	14900
industry, employment outlook	9450	laser-satellite reflection	16996
industry report	3952	line, and computed spectra for water vapor bands at 2.7μ	14937
newsprint, world supply-demand, outlook through 1966, report	19466	parametric investigation of aerodynamic and aeroelastic characteristics of articulated and rigid, hingeless, helicopter rotor systems	21907
products industry, employment outlook	9450	performance analysis for interplanetary missions utilizing 1st-generation nuclear stages	21759
see also Wood pulp—also names of articles manufactured from paper.		study of constant thrust, electrically propelled Mars and Venus orbiting probes	21753
Paper mills, western Kentucky, establish paper mill in an 8-county area, technical and economic feasibility	17027	thruster performance with analytic space-charge flows	9617
Paper pulp, see Wood pulp.		Paraplegics:	
Paper work, see Paperwork (office practice).		housing program, expand—	
Paperboard:		hearing	4573
cross sections, preparing at Forest Products Laboratory	12443	law	17260
current industrial reports	3390, 21034	report	15695
industry report	3952	Pararescue medical kit	9979
Paperboard boxes, see Boxes.		Parasites:	
Paperhangers, employment outlook	9421	animal, unusual infestations reported	16940
Papers, see Records.		fish, publications in English, list	15921
Paperwork (office practice):		freshwater fish	6716
Federal jungle, hearings	12150, 14014, 15599	Hawaiian acanthurid calligoid copepods, parasitic on fishes	7602
forms management, Navy Department guide, change	5624	parasitofauna of pond-raised carp, USSR study	4917
small store and service trade, recordkeeping systems, bibliographies	9765, 21867	publications on fish parasites and diseases, 330 B.C.—A.D. 1923	8621
mechanizing paperwork, source data automation systems	13266	Parasitology:	
Pappas, C. C.:		laboratory, work described, USSR study	11099
heat-transfer measurement—		laboratory procedures, Air Force manual, change	20950
for binary gas laminar boundary layers with high rates of injection	20600	natural foci of diseases, methods for developing study in USSR and abroad, USSR study	12815
recovery factor of compressible turbulent boundary layer on sharp cone with foreign gas injection	9593	Rumania, Dr. I. Cantacuzino Institute, activities	16016
Parachute riggers 3 & 2, Navy training course	9679	see also Zooparasitology.	
Parachutes:		Parawings, see Wings (aircraft).	
clustering, wind tunnel study	47	Parcel post:	
drag, ribless guide surface to produce low lift to drag, ratios, flight qualification	5882	agreement with Kuwait	21889
preformed elliptical, performance	7542	handling, develop more economical plan to cut costs (address)	9696
pyrotechnic systems, tests	15227	Parcher, Frank M., what is your job in war disaster	14219
radially vented, stability and drag characteristics	9612	Parents:	
35-ft. ring-slot extraction system development	16967	absent, of children receiving AFDC, coordination in location, report of meeting	4672
Parachutists, free-fall trajectories	13617	abusive, social signs are helpful toward prevention of child abuse	11920
Paradise quadrangle, Utah, geology	19778	education, specialists, directory	1828
Paragliders, see Gliders (aircraft).		foster, use of group methods	8146
Paraguay:		infantile epilepsy explained	21542
agricultural commodities, agreements	9814-15, 21885	nursing role in counseling parents of mentally retarded children	10081
defense, road construction and maintenance capability of Paraguayan Army, agreement	9834	of children with phenylketonuria, group guidance	13780
economy, basic data	6854	orientating to clinic for retarded children	11919
foreign trade regulations	4855	with mentally retarded children, use of closed short-term group as treatment adjunct	13776
Parahydrogen, heating, laminar-instability problem due to using long, slender tubes, steady-state analysis	7507		
Paralysis, see Facial paralysis.			
Paramagnetic amplifier for planetary radar, USSR	7244		
Paramagnetism, see Magnetism.			



# INDEX 1964

	Entry
Paris and the 3d world.....	10995
Paris Landing, Tenn., real property acquisition practices and adequacy of compensation, hearings.....	15602
Pariser, E. R., MIT-UNICEF studies on production of fish protein concentrate for human consumption.....	8601
Parker, John B., Jr., Africa's tobacco industry.....	764
Parker, John E.: study of strength of short and intermediate wood columns by experimental and analytical methods.....	12448
wind stresses in pole building frames.....	18061
Parker, John G., rare-earth minerals and metals.....	18679
Parker, John J., Jr., tobacco industry of western Asia.....	8627
Parker, Phillip L., pyrotechnic systems parachutes.....	15227
Parker, Richard J.: surface failure of— alumina balls due to be repeated stresses applied in rolling contact at temperatures to 2000° F.....	13227
titanium carbide cermet and silicon carbide balls in rolling contact at temperatures to 2000° F.....	18783
Parker Dam and powerplant, general information.....	13432
Parker-Davis project: Davis Dam and powerplant, general information.....	13431
Parker Dam and powerplant, general information.....	13432
Parkinsonism: progress in research, summary.....	14956
synchronization of motor units and related model representations, study.....	11226
Parkinson's disease, progress in research, summary.....	14956
Parks, for America, resources survey.....	18831
see also National parks—also names of parks.	
Parks Air Force Base: fraudulent Government checks issued, relief of persons involved in negotiation— law.....	1951
report.....	2207
Parliamentary conferences, see Interparliamentary Union—Mexico-United States Interparliamentary Group.	
Parmelia, see Lichens.	
Parole, casework, considerations in diagnosis and treatment.....	10076
Parolees, under supervision of Federal probation system, 1963, report.....	13556
Parotid: fluid— corticosteroid levels at 1 and 2 hours after graded doses of ACTH.....	19183
corticosteroids, identification and significance.....	5901
intramuscular ACTH test based on free 17-hydroxycorticosteroid levels.....	17013
self positioning device for collection from isolated human subjects.....	8003
Parratt, Lloyd, and family, relief.....	1891, 2148
Part-time workers, see Labor.	

	Entry
Parthenogenesis, vertebrate, USSR study.....	19992
Particle board, see Pulpboard.	
Particleboard, see Pulpboard.	
Particles: atomic, interaction with surface of metal.....	8047
droplet impact measurements, theoretical aspects.....	13
pigment size separation.....	14787
2d phase, interaction of dislocations, USSR study.....	2839
size distribution in Brownian motion.....	14
spin zero elastic scattering with nuclear optical model, Fortran program for analysis.....	9570
see also Alpha particles.	
Partition functions and thermodynamic properties of high temperature gases.....	7988
Partitions, counterline-screenline equipment procurement practices by Post Office Dept., GAO report.....	8725
Partnerships, income tax returns, statistics, 1961-62.....	2449, 12548
Partridges, black and gray francolins, study and review.....	15931
Parts, see Repair parts.	
Pascua Yaqui Association, Inc., land conveyance.....	17475, 17688, 21107
Pase, Charles P., vegetation changes following Mingus Mountain burn.....	12471
Passaglia, E., ellipsometry in measurement of surfaces and thin films, symposium proceedings.....	21782
Passaic, N.J., occupational wage survey.....	16595
Passaic River: navigation channels, maintenance, engineer report— departmental edition.....	8518
document edition.....	8260
Passamaquoddy region: economic survey of U.S. fisheries, 1956-57.....	10575
herring fishery.....	21320
Passamaquoddy tidal power project: development, authorize, hearing.....	17890
appendix material.....	17859
development, values for New England (remarks).....	844
Passenger cars, railroad sanitation, construction operation, etc., handbook.....	9715
Passenger traffic, U.S. and foreign countries.....	3970, 4829, 12537
see also Railroads.	
Passenger trains, see Railroads.	
Passenger vessels, see Ships.	
Passengers: passenger transportation survey, advance and/or preliminary reports.....	17079-81, 21027
travel between U.S. and foreign countries.....	3970, 4829, 12537
Passports: application requirements, care, etc. German Democratic Republic, implementing regulations pertaining to laws.....	1351
information and travel tips, do's and don'ts.....	15095
information for applicants.....	16871
nonimmigrant visa issuance and registered demand for quota immigrant visas.....	2115
not required of U.S. citizens, list of areas and general information.....	7771
summary of statistics.....	4068

# JANUARY-DECEMBER

	Entry
Passports—Continued	
United States, visa charges of foreign countries, list.....	7760, 15097
visas, abolition of fees, agreement with Yugoslavia.....	13475
Paste, Federal standard.....	12410
Paste (Italian), see Macaroni.	
Pasternak, R. A., high temperature oxidation and nitridation of niobium in ultrahigh vacuum.....	8085
Pasteurization:	
application of radiation-pasteurization processes to Pacific crab and flounder.....	19250
fruit produce, radiopasteurization, mobile gamma irradiator, conceptual design study.....	5986
irradiated fishery products.....	8087
radiation of foods, summaries of accomplishments, 3d annual contractors meeting, 1963.....	11868
shrimp, radiation treatment.....	13706
Pasture, commercial fertilizer used on crops and pasture in United States, 1959 estimates.....	16971
Pasture crops, see Forage plants.	
Pasture lands:	
dairy, 1965 season, summary.....	1624
Kansas and Oklahoma, bluestem and Osage pasture report.....	16881
Patashnik, Max, net-weight determination for frozen glazed fish.....	6708
Patent Advisory Panel, progress report, June 1964.....	19678
Patent aid, examination announcement.....	1847
Patent examiners:	
examination announcements.....	213, 11954
discontinuance notice.....	11943
manual of procedure, change notices.....	1537, 3086, 5630, 11530-532, 20717
Patent Office:	
administration, investigation—	
authorization, report.....	6454
report.....	10402
classification bulletin.....	7669-70, 9691-92, 15018-19, 20716
decisions—	
departmental edition.....	11528
document edition.....	10155
fees by applicants for patents, etc., increase—	
hearings.....	14147
report.....	376, 2073
oaths for documents filed with, eliminate requirements—	
law.....	8231
reports.....	508, 6305
official gazette.....	3810
press releases.....	3913
program goals and action (address).....	18874
trademark, index.....	7671
Patents:	
American economic progress, the bar and patent system (address).....	20715
American economy, patent system, and the bar (address).....	16805
answers to questions frequently asked about patents.....	16806
appeals cases adjudged.....	6534
basic facts, information aid for inventors.....	21830
classification.....	3810
index.....	1536
classification manual.....	3703
replacement pages.....	7672, 11529, 18872
code of Federal regulations.....	8576
decisions, weekly.....	3810
decisions, yearly, 1963—	
departmental edition.....	11528
document edition.....	10155

	Entry
Patents—Continued	
Eastern Utilization Research and Development Division, lists.....	4192, 15204, 18873
examining procedure, manual.....	3704, 1537, 20717
change notices.....	3086, 5630, 11530-532, 20717
fees paid by applicants to Patent Office, increase—	
hearings.....	14147
reports.....	376, 2073
gasification, index.....	18600
Government policies, latest development (remarks).....	13831
Hungarian National Patent Office, applications to.....	14515
in official gazette.....	3810
index, 1963.....	9693
industrial diamonds, U.S. list.....	11314
laws, investigation—	
authorization, report.....	6454
report.....	10402
Northern Utilization Research and Development Division, list.....	7901
obtaining information from patents.....	13372
patent abstract series.....	15135
Polish, abstracts, translations.....	1801-2, 4338, 7684
publications, price list.....	7684
rights, interchange, agreement with, Germany.....	18965
Southern Utilization Research and Development Division, semi-annual lists.....	5800, 19061
Swiss, translated.....	1803, 9855
USSR, electronic equipment.....	1207
Western Utilization Research and Development Division, semi-annual lists.....	7900, 16936
see also names of persons, firms, etc., applying for patents.	
Paterson, N.J., occupational wage survey.....	16595
Pathfinder operations, Army field manual.....	97
Pathogenesis:	
and treatment of burn sickness, USSR study.....	10958
chemical bases of pathogenicity of microorganisms, USSR study.....	21633
microorganisms, USSR studies.....	2527
pathogenic bacteria in endogenous medium, detection, USSR study.....	20219
specific pathogen free hog production, economic aspects.....	8469
Pathologists, all-Union congress, USSR.....	19961
Pathology:	
cholinergic processes, USSR study.....	5046
cytopathology, use of television microscopy.....	3114
histopathology of mice fed irradiated food.....	110
muscle tone, electromyography, USSR study.....	5096
psychopathology of psychoses produced by hallucinogens, Czechoslovak study.....	7072
Soviet research on higher nervous activity under pathological conditions.....	19868
structure, properties and pathological changes of elastic structures, current data, USSR study.....	14593
USSR—	
dissertation.....	20141
translations.....	7335
Pathopsychological research in active therapy of psychoses, USSR.....	11142

# INDEX 1964

	Entry
Patients:	
hospital care, methods of studying..	15061
in mental institutions—	
1961 .....	3057, 5558, 7588, 9645
1962 .....	14950, 16747-750
long term care .....	20762
long term, design of facilities, references .....	3100
mental hospitals, State and county, movement—	
data, 1960 .....	16746
data, 1961 .....	21794
microwave treatment, USSR study .....	14576
progress, how to study .....	13406
stroke, up and around, booklet to aid in activities of daily living .....	13422
tuberculous, vocational rehabilitation opportunities .....	7835
Patrick Draw area, Wyo., formation damage estimated from water sensitivity tests .....	18702
Patternmakers, 3 & 2, Navy training course .....	1526
Patterns:	
efflux, and flow rates from cylindrical tubes in free-molecule and slip flow, measurements .....	20606
progress in aging, case study (series) .....	9888, 11717
Patterson, D. E., summary of incidents involving USAEC shipments of radioactive material, 1962 .....	1778
Patterson, Elmer D., coal resources of Beaver County, Pa .....	2417
Patterson Eugene C., nomination, hearing .....	17881
Patterson, James L., floods of lower Mississippi River basin .....	4817
Patton, Rollin M., behavioral testing during confinement .....	3010-11
Patton, William W., Jr., geology of Killik-Itkillik region, Alaska .....	19781
Patuxent River:	
tidewater portion, hurricane survey, engineer report—	
departmental edition .....	17957
document edition .....	17469
Paul, Norman S., address, Sept. 18, 1964 .....	20984
Pavements:	
airfields—	
design manual .....	20891
design provisions, engineering manual .....	15872
flexible and prefabricated, Waterways Experiment Station design capabilities .....	632
flexible, engineering and design manuals, change .....	12350
minimum horizontal dimensions for infinite slab behavior determination, model study .....	17950
naval and Marine Corps, evaluation data .....	7874
Navy design manual, changes .....	3199
rigid—	
engineering and design manual, change .....	12351
overlay test track, Sharonville, Ohio .....	4670
prestressed, repetitive loading model tests .....	12352
use of unsuitable materials to construct at Selfridge Air Force Base, Mount Clemens, Mich., Air Force Dept., GAO report .....	10628
airport paving, FAA advisory circular .....	17021
concrete, standard practice—	
Engineer Corps, Army .....	2295-96
engineering and design manual, change .....	2298

	Entry
Pavements—Continued	
design for frost conditions, engineering manual change .....	14204
epoxy-asphalt concrete mixtures, laboratory and field study .....	6598
Pavilions, United States, New York World's Fair, Government publications display, list .....	15059
Pavlick, Anthony L., quality of rural and urban housing in Appalachian region .....	10454
Pavlidis, Louis, Hovey Group of northeastern Maine .....	19779
Pawlik, Eugene V., experimental evaluation of size effects on steady-state control properties of electron-bombardment ion thruster .....	20597
Pawnee Indians:	
disposition of judgment funds to Pawnee Tribe of Oklahoma—	
law .....	17333
reports .....	15490, 15777
Pawtucket, R.I., occupational wage survey .....	16598
Paxton, H. C., critical dimensions of systems containing U-235, Pu-239, and U-233 .....	17062
Pay see Salaries—Wages.	
Pay, allowances, etc.:	
Air Force, medical and dental officers, relief—	
law .....	8222
reports .....	377, 8409
Army and Air Force officers erroneously paid uniform allowances, relief—	
hearing .....	19591
law .....	19426
reports .....	13934, 17850
Army and Air Force Reserve officers, on annual active duty training, payment for days on which no training or travel was performed, GAO report .....	10612
Army National Guard, financial administration, pamphlet .....	9641
improper or unnecessary payments of pay, travel, and other allowances to crew members of U.S.S. Kitty Hawk by Department of Navy, GAO report .....	10602
increase basic pay of uniformed services—	
hearings .....	15583
law .....	17281
reports .....	14119, 15505
military personnel, Department of Army, unnecessary costs being incurred for payment of maintenance and allotments, GAO report .....	18092
missing persons, amend act—	
hearing .....	17866
law .....	17287
report .....	15742
Navymen and dependents, rights and benefits .....	13319
new uniformed services pay act of 1963, it pays to stay in .....	11830
nuclear-powered submarine construction, unnecessary per diem payments, Navy Dept., GAO report .....	8742
per diem, equalize treatment of Reserves and Regulars in payment, report .....	13939
per diem to Coast Guard members assigned to Reserve Training Center, Yorktown, Va.—	
law .....	17294
reports .....	12062, 21230

# JANUARY-DECEMBER

	Entry
Pay, allowances, etc.—Continued	
travel of dependents of military personnel, improper payments, GAO report.....	6767
travel or transportation allowances, authorize for canceled, etc., orders—	
hearing.....	6496
law.....	1967
report.....	2212
uniform allowances, combining service in more than one reserve component in computing—	
hearing.....	19591
law.....	19432
reports.....	13942, 17849
unnecessary per diem payments for military personnel reporting early for temporary duty assignments, Navy Dept., GAO report.....	8741
walver of collection of erroneous payments, report.....	15509
withholding and forfeiture of pay of prisoners of war who aid enemy or guilty of other misconduct, report.....	15741
Pay rolls:	
Federal agencies, principles and procedures, GAO guidance manuals.....	792-793, 2399
Post Office Dept., weaknesses in—	
headquarters activities, GAO review.....	6792
regional activities, GAO report.....	10613
relief rolls to payrolls, community, work and training program.....	8526
Payloads, rocket, small multipurpose for ionospheric studies.....	13240
Payments:	
international monetary system potentialities (remarks).....	13502
timing, for Federal grants, contributions, and other programs, regulations.....	13499
U.S. trade in 1963.....	10545
Payne, Brian R., trends in reforestation and its cost in Pacific Northwest.....	12485
Payne, Elmer J., relief.....	315, 6429, 13857
Payne, Richard R., relief.....	315, 6429, 13857
Payrolls, see Pay rolls.	
Paz, Francisco Navarro, see Navarro-Paz, Francisco.	
PCA, see Production credit associations.	
PCM, see Radio pulse code modulation.	
PCM-FS, see Pulse-code-modulation-frequency-shift-system	
Pea aphids, alfalfa, how to control.....	9946
Pea beans, see Beans.	
Pea Ridge National Military Park, general information.....	13304
Peace:	
Ceylon needs peace.....	6965
food for peace, activities under Public Law 480.....	13923, 19452
newsletter.....	3515
North Vietnam article.....	9040
power for peace, Armed Forces Day, speakers' guide for service spokesmen.....	8467
prescription for Laos and Vietnam.....	13667
preserving, in southeast Asia.....	17461
President Johnson's proposals at Geneva conference, elaboration.....	15261
translations from Hoc tap.....	7322

	Entry
Peace—Continued	
war and peace, 2 different lines of questions, Communist Chinese comment on open letter of CPSU.....	4971
woman's role in bringing peace through understanding (address).....	13537
Peace Corps:	
act, amendments—	
hearings.....	399, 6355, 6507
laws.....	1929, 8224
reports.....	333,
336, 2196, 6281, 6300, 6474	
annual report, 1963.....	7673
appropriations, 1964—	
hearings.....	2229
law.....	1985
reports.....	2069,
2098-99, 2103, 2220, 12045	
appropriations, 1965, reduction.....	10194
biographic register.....	1595
facts about service.....	11533
foreign assistance appropriations, 1965—	
hearings.....	19588
law.....	21126
reports.....	13950, 13952, 19582
foreign operations appropriations, 1964, hearings.....	12117
Peace Corps volunteer (periodical).....	3839
press releases.....	3914
program, agreement with—	
Indonesia.....	9813
International Labour Organization.....	3153
Ivory Coast.....	13472
Panama.....	18978
Senegal.....	3161
Uruguay.....	1614
volunteers.....	
opportunities in Federal civil service.....	11591
quarterly statistical summary.....	3840
Peaches:	
growing east of Rocky Mountains.....	19073
phony disease, control.....	7927
production, use, value, by States, 1962-63.....	15129
reduction of postharvest decay with heat treatments.....	13586
Peak, George W.:	
Federal-State-private cooperative summary of snow survey measurements for Wyoming, headwaters of Missouri River, etc., water supply outlook and Federal-State-private cooperative snow surveys for Wyoming.....	4146
Peanut butter:	
prices, marketing margins, and uses of peanuts.....	1706
recipes.....	11758
Peanuts:	
commercial stocks, millings, processing, seasons 1939-40 through 1962-63, months Aug. 1949-July 1963.....	16972
effects of close-row spacings on yield and production equipment requirements.....	4220
market news, weekly report.....	3841
marketing.....	4206
prices, marketing margins and uses in peanut butter.....	1706
recipes.....	11758
stocks and processing.....	3842, 21894
Pearcy, G. Etzel:	
geographic regions of Asia, south and east.....	11617
Middle East, indefinable region.....	15102



# INDEX 1964

	Entry
Pearl Harbor Day:	
proclaim Dec. 7, 1966, in commemoration of 25th anniversary of attack—	
law	13914
report	14085
production, use, value, by States, 1962-63	15129
survey of pears, nuts, and other fruit clones in U.S.	15196
Pearson, Gregory L., water supply outlook and Federal-State-private cooperative snow surveys for Utah	4143
Pearson, Richard G., human factors, aspects of lightplane safety—	13737
Pearson, Walter E., direct solution of governing equation for radiation-resisted shock waves—	5519
Peas:	
dry, foreign trade prospects—	8629
foreign agriculture circulars—	3520
Peat, minerals yearbook chapter—	20494
Peat moss, Canada, determination of no injury or likelihood thereof to U.S. industry—	9847
Pecan:	
economic aspects of production and marketing, Arkansas, Florida, South Carolina, Mississippi, New Mexico, Georgia—	17900
nursery industry, structure and economic aspects—	565
Peck, Alan S., infrared study of effect of fluoride, sulfate, and chloride ions on adsorption of oleate on fluorite and barite—	11319
Peck, Dallas, L., geologic reconnaissance of Antelope-Ashwood area, Oreg.—	4778
Peck, Lee C., systematic analysis of silicates—	10633
Peckham, Vernon, feasibility of aircraft oil analysis system for operational use in field, investigation—	3172
Pecos River and Valley:	
appraisal of potential ground-water salvage—	8779
water, reduce nonbeneficial consumptive use in basin—	
law	19402
report	15494
Pedagogy, see Education.	
Pediatrics, see Children.	
Peek, Scott L., testimony, hearings—	6526
Peer rating, see Ratings.	
Pegmatite:	
and other Precambrian rocks in southern Black Hills (series)—	4783
geology and mineral deposits, southern Black Hills, S. Dak.—	4783
Pelzer, H. Steffen, research on crystal growth, etc., at NBS—	9638
Pekar, Ivanka, relief—	449
Pelage, fur seal research, Alaska waters, 1962—	8622
Pelecypods, marine Jurassic, from central and southern Utah—	18137
Pegler's leucocytic anomaly, see Leucocytes.	
Pelican Lake:	
bed or former bed, disclaim title of U.S. to certain property—	
law	21118
report	17689
Pellets:	
iron ore, prerduced, production and smelting—	20499
steers fed pelleted rations, comparison of chromic oxide and conventional methods in digestion trials—	19105
Pellini, W. S., applying laboratory fracture test criteria to fracture-safe design of pressure vessels—	13339

	Entry
Penalties:	
bribery in sporting contests—	
law	13866
report	2079
criminal, false statements in connection with highway construction program, hearings—	14010
feed sold by CCC for maintenance of foundation herds, misuse, law—	19393
juvenile delinquents escape—	
law	1979
reports	507, 2045
marine terminal leases, exemption—	
hearing	6499, 15596
law	6186
reports	2206, 6274
Pend D'Oreille Indians, see Kallispel Indians.	
Pender County, N.C.:	
title to land, convey to Board of Education—	
law	17403
reports	15513, 17770
Penetration of shaped charges into frozen ground—	8516
Penetrometers:	
aerial cone, field test studies in fine-grained soils—	643
application to study of physical properties of lunar and planetary surfaces—	18748
for measuring absolute viscosity of glass—	7438
Penicillin:	
antibiotic action on staphylococcus, USSR study—	16035
prolonged action by use of polyvinyl pyrrolidone, USSR study—	5068
Penitentiaries:	
East Germany—	5406
Leavenworth, State highways bordering, retrocede jurisdiction to Kansas—	
law	17360
reports	14110, 17522
national—	
Investigation, authorization, reports—	4560, 6478
Investigation, report—	6478
prisons and justice, selection of writings of James V. Bennett—	12166
Penland, Jim A., stability and pressure on sharp right circular cones at hypersonic speeds—	11410
Penmanship:	
handwriting analysis, Japanese studies—	2825
value of examination in criminology, USSR study—	6956
Pennanen, Jarno, editor, and Tilaane, Finnish newspaper, controversy over—	21441
Penney, Millard F., bibliography on architecture of mental health facilities—	13416
Pennington, R. T.:	
nuclear superheat project—	
11th quarterly report—	4295
14th quarterly report—	4296
Pennock, Jean L., rural family spending and consumption in low-income area in Kentucky—	19081
Penns Grove, N.J., motor carrier accident—	21378
Pennsylvania:	
annual survey of manufactures, 1962, standard metropolitan statistical areas, and large industrial counties—	4343
anthracite mine, longwall mining, use of yielding steel props—	7455
bituminous strip mine spoils, 2d year results of hybrid poplar test plantings—	14321
climatic summary, 1931-52—	13518

# JANUARY-DECEMBER

	Entry		Entry
Pennsylvania—Continued		Pensions—Continued	
climatological data	3329	United Brotherhood of Carpenters and Joiners of America local union 746 fund, tax exemption as qualified trust	2004
coastal area, fishery products, wholesale dealers, list	18009	veterans—	
compact concerning Delaware River Port Authority, consent of Congress—		disability ratings in effect 20 or more years, preservation, law	17304
hearing	4505	laws, compilation	21215
law	13870	non-service connected, miscellaneous bills on benefits, hearings	14019
reports	2087, 2187, 12210	non-service connected, World Wars and Korean, and widows, etc., revise, disability and death rates—	
compact establishing Delaware River Joint Toll Bridge Commission, consent of Congress to supplemental agreement, report	346	hearings	17875
electric rate book	14250	law	21156
fishery products, wholesale dealers, list	708	reports	15541, 19508, 21198
Great Lakes area, fishery products, wholesale dealers, list	730	service-connected veterans, disabled, compensation ratings in effect 20 or more years, protection, reports	10278, 15765
labor organizations, reporting, register	16370	welfare and pension plans disclosure act—	
leader in agricultural programs (address)	5860	fidelity bonding	21656
mineral industry, minerals year-book chapter	2988	questions and answers	11248
municipal waste facilities—		see also Civil service pensions.	
1962 inventory	8102	Pentoney, R. E., wood laminates in flexure for marine use	9762
1963 inventory	18907	Pen Yan quadrangle, N.Y., bedrock geology	12503
Pennsylvania Horticultural Society, new headquarters, dedication (address)	19812	People's Republic of China, see China.	
precipitation data, hourly	3578	Pepin County, Wis., soil survey	11613
Pymatuning Lake compact—		Pepper, Leonard, stainless and copper-clad steel wires as reinforcement for articulated concrete mattresses	14214
amend rel. to use of motorboats, consent of Congress—		Peppers:	
law	15388	bell, postharvest bacterial soft rot, hot water treatment and hydro-cooling, effect	11735
reports	10230, 14081	production	5818
truck inventory and use survey, July 1, 1963	21027	Pepsin, and trypsin fragments during autolysis and electrodialysis, structure formation and enzymatic activity, USSR study	7149
western, coal resources (series)	2417, 10771	Peralta, John A., relief	4446, 15636, 17178
Pennsylvania Avenue, President's Council on, see President's Council on Pennsylvania Avenue.		Percentage points of beta distribution	13275
Pennsylvania R.R., accidents	875, 14406, 15992, 21379	Percentages, points of F distribution, calculation	19161
Pennsylvanian period, floras, analysis of succession	8771	Perception:	
Penobscot County, Maine, soil survey report	7744	and short term memory under work load stress	20706
Pension Building, historical study	7681	auditory, sensitivity to unidirectional frequency modulation	5463
Pensions:		binaural beat problem	4316
Army, Navy, etc., waive time limitation for increased pay claims, report	2032	cybernetic approach to problem of image, USSR study	16439
Coast Guard good conduct retirement pay, repeal, hearings	6367	depth—	
code of Federal regulations	10533	from binocular disparity	4313
Laborers' Pension Fund of Hudson County, N.J., tax exemption as qualified trust	2007	size cues and adjacency principle	13730
Medal of Honor holders, based on noncombatant duty—		distortion, distance and perspective in Ames trapezoid illusion	21828
law	21143	factors affecting visual and auditory analyzers, Soviet research	5049
reports	10276, 14073, 19494	fusion thresholds of light stimuli in visual analyzer of man, USSR study	9220
plans for salaried employees, spring 1963	14704	information theory and perception, USSR studies	20368
private plans and labor mobility, vesting, early retirement, and portability provisions study	16609	skin vision, USSR studies	20254
Public Health Service and Coast and Geodetic Survey commissioned officers, credit military services in computing Reserve retired pay—		spatial perception and spatial concepts, problems	14910
hearing	13995	visual—	
law	21128	after-images as source of information	16797
reports	15504, 17854	and nucleic acids, USSR studies	16502
retired servicemen—		color, factors affecting in induced fields	5464
family protection plan	20982		
survivors annuity rights, protect, hearing	17869		
unfunded private plans	13070		

# INDEX 1964

Entry	Entry
Perception—Continued	Perkins, Ellen J., AFDC in review
visual—continued	1936-62----- 7845
effects of corrective lenses, filters, and structure in empty visual fields----- 18856	Perlee, Henry E., formation and flammability of stratified methane-air mixtures----- 7432
illusions during parabolic flight maneuvers, exclusion of angular accelerations as cause----- 79	Perlite, minerals yearbook chapter----- 18676
James J. Gibson theory, analysis of selected papers----- 15002	Perlmutter, I. Richard:
Mercury-Atlas 9 (MA-9) mission, flashing-beacon experiment----- 16694	antisocial behavior of minor in United States----- 13783
of spatial extent----- 5996	juvenile delinquency, social and economic trends----- 6054
response and feedback techniques for automated training of identification skills----- 20703	Perlmutter, Morris:
see also Information theory in psychology—Sight.	flow and heat transfer between heated plates of finite length in free-molecule flow environment----- 21766
Perception, theory fundamental monograph----- 1059	Monte Carlo solution for characteristics of highly rarefied ionized gas flowing through channel with transverse magnetic field----- 21768
Perchloric acid, stainless steel fume hood for safety in use----- 14755	Permafrost:
Perdido Pass Channel:	bibliography with abstracts----- 8511, 19652
navigation improvements, engineer report----- 17953	cumulative index----- 15866
departmental edition----- 17671	research, selections from merzlotnye issledovaniya----- 5015
Pereyra, Walter T., scope ratio-depth relationships for beam, shrimp and other trawls----- 14268	tunneling in Tuto area, Greenland----- 10487
Perfluorocyclobutane, thermodynamic properties of real gas----- 14757	Permanent Subcommittee on Investigations, see Government Operations Committee, Senate.
Performance measurement in flight simulation studies----- 14790	Permanente Creek, streamflow regimen, effect of urban growth, Santa Clara County, Calif----- 18139
Performance ratings, see Efficiency ratings.	Permeability, weathered crystalline rocks, Georgia Nuclear Laboratory, Dawson County, Ga----- 8753
Performance, story of the hand-capped----- 3845	Permian period:
Performance tests, see Airplanes.	floras, analysis of succession----- 8771
Performing arts:	geology of rocks in western phosphate field (series)----- 2420, 15946
periodicals, repeal exemption as to filing of information----- 8392	Wyoming, western, physical stratigraphy and mineral resources----- 2420
hearing----- 10265	Permits, see classes of persons to whom, or subjects for which, permits are issued.
report----- 10265	Permselective membranes, see Membranes.
Perinatal research, see Pregnancy.	Perreault, John O., success and failure factors in small business----- 16855
Periodicals:	Perrella, Vera C.:
agriculture bibliography, serial publications indexed in----- 14930	employment of high school graduates and dropouts in 1963----- 14709
American agricultural current, list----- 1489	marital and family characteristics of workers----- 11297
Army Library-----	Perros, George P., papers of United States Senate relating to presidential nominations, 1789-1901----- 21781
currently received, checklist----- 19043	Perry Dam and Reservoir, designate Ozawie Dam, etc., hearing----- 21211
selected literature, list----- 4027	Pershing, John J., trophy, NGB, announcement of winners, pamphlet----- 21788
copyrighted, catalog of copyright entries----- 550, 8458, 17893	Pershing Hall, transfer control to Administrator of Veterans' Affairs, report----- 363
Government, price list----- 5642, 11547, 16824, 21839	Persian Gulf, lights and fog signals, lists----- 9674, 16779, 21813
magazine reprint MR series----- 3700	Persimmons, productions, use, value, by States, 1962-63----- 15129
military, Air University Library index----- 3238	Person, Philip H., jr., processing guide for mental hospitals----- 11450
performing arts, repeal exemption as to filing of information----- 8392	Personal affairs, your personal affairs, DoD pamphlet----- 4275
hearing----- 10265	Personal property:
report----- 10265	brought into U.S. under Govt. orders, exemption from duty, extend-----
received in NIH Library, 1964----- 13288	law----- 13873
scientific journals, characteristics----- 21864	reports----- 8349, 12239
social science bibliography, Poland, 1945-62----- 15324	business of leasing by banks, prohibit, hearings----- 10302
Periodontal disease:	Defense Department utilization and marketing handbook----- 12301, 21253-254
caries, oral glucose tolerance responses in males----- 4260	
examination systems, study----- 15239	
fasting and postprandial serum glucose levels as related to caries experience----- 19181	
horizontal tooth mobility----- 8005	
Peritoneum, bovine, use in treatment of burns, USSR study----- 5002	
Perkins, David M., magnetic results South Pole traverse, 1962-63----- 17148	
Perkins, Edward C., fluidized-bed chlorination of titaniferous slags and ores----- 1436	

# JANUARY-DECEMBER

	Entry
Personal property—Continued	
seized, tax disposition, regulations—	4845
surplus—	
classes sold by Defense Dept.—	6538
how to buy from Defense Dept.—	15831
tax on selected motor vehicles—	7715
Personality, development, of people engaged in mental work, USSR study—	10780
Personnel administration, <i>see</i> Administrative management.	
Personnel management, <i>see</i> Administrative management.	
Personnel methods series—	17139
Personnel Research Laboratory: reports, abstracts, 1963—	7993
technical documentary reports—	4256,
7993-94, 9983-85, 11802-803,	
13633-635, 15232-235, 17002,	
19161-164, 20970-971.	
Personnel services in education:	
pupils problems—	5450
school, physical facilities for guidance services—	8489
Personnel workers:	
employment outlook—	9404
Veterans Administration, inclusion of volunteer workers in determining allowable number to defeat intent of appropriation act limitations, GAO report—	10607
Persons under supervision of Federal probation system, fiscal year 1963—	13556
Perspiration:	
comparison of mineral excretion (calcium and iodine) in arm and total body sweat—	19223
excretion of lipid and lipid substances in human sweat—	8045
measurement of physiologic evaporative water loss—	18727
trace mineral losses in sweat—	19224
PERT, <i>see</i> Program evaluation and review technique.	
Perturbations:	
celestial bodies, simultaneous computation of secular and resonance effects—	13223
moon, influence of form on its motion, USSR study—	6996
planetary, modification of Hill's method—	14897
rocket pump inlet, suppressed by compensating-bellows device—	16714
2d-order solution of artificial satellite theory without air drag—	20576
secular, Halphen's method applicable to long range effects in motions of celestial bodies—	9618,
	14902
<i>see also</i> Three-body problem.	
Peru:	
agricultural commodities, agreement—	11628
fish meal and oil report, 1963—	19730
foreign trade regulations—	21074
labor, etc.—	11274
market factors—	18173
plant quarantine import requirements—	9925
uranium—	21014
weather stations, cooperative meteorological program, agreement—	20833
Peru area, Brazil, reconnaissance for uranium—	17058
Pesticides:	
chemical, summary of registered agricultural uses, supp—	19, 9927
chlorinated hydrocarbon, identification, etc., in surface waters—	20758
ecological implications to man of use of chemicals (paper)—	7692

	Entry
Pesticides—Continued	
economic poisons, labeling and registration—	
law—	12000
report—	4480
effects of chemicals on earthworms—	8624
effects on molluscan shellfish, hearings—	405
farmers' checklist for pesticide safety—	15219
injurious effect on fish and wildlife, prevent or minimize, report—	10216
interagency coordination in environmental hazards, hearings—	6510,
	17878
print additional copies, report—	15689,
	17511
laws and regulations, administration, hearing—	13986
new, USSR study—	12618
particle-size distributions in Brownian motion—	14
pesticide-wildlife studies, review of Fish and Wildlife Service investigations, 1961-62 correction—	2337
protection, respiratory devices—	15194
research for protection of fish and wildlife, increase authorization, report—	12216
residues—	
in food products, double isotope derivative dilution analyses—	5974
removal from foods, application of radio-chemistry techniques in food processing research—	19243
safe use in home and garden—	11777
situation for 1963-64—	16941
Pests:	
agricultural, control, USSR study—	10919
biologic control, Rumanian study—	1036
forest pest leaflets—	767,
	12433-434, 14298-300, 15936,
	18043-45, 21324.
household controlling—	7922
intercepted plant pests, list—	7899
livestock pest control urged, USSR—	7141
<i>see also</i> Insects.	
Peterka, A. J., hydraulic design of stilling basins, etc.—	9743
Peters, Roger W., effect of resin composition and fillers on performance of molded charring ablator—	3017
Petersen, Robert P., development of isotope techniques for relocation of land monuments—	19253
Peterson, Clarence E.: electronic data processing in engineering, science, and business, etc—	8481
job descriptions, etc., for electrical and electronic technologies—	10466
Peterson, Donald C., evaluation of UH-1D equipped with XM-6E2 armament kit—	13620
Peterson, Esther:	
addresses—	
July 21, 1964—	16817
Oct. 5, 1964—	20732
needs and opportunities in our society for educated women—	21927
Peterson, J. W., measurement of upper-air density and temperature by 2 radar-tracked falling spheres—	9533
Peterson, John J., fatigue behavior of AM-350 stainless steel—	13139
Peterson, Maurice J., semiquantitative spectrochemical method for analysis of coal ash—	16645

Do not order from index; see indicated entry

Page 489



# INDEX 1964

	Entry
Peterson, Roger S.:	
effects of broom rusts on spruce and fir	8675
fir broom rust	15936
Peterson, Warren L., geology of Platte County quadrangle, Colo	12507
Peterson, William P., tables of flow properties of thermally perfect carbon dioxide and nitrogen mixtures	11361
Petkof, Benjamin:	
diatomite	14734
gem stones	20474
mica	20486
Petri, L. R., water resources of Wichita area, Kans.	10650
Petrified forests, Yellowstone National Park	18832
Petrochemicals, enterprises engaged in organic synthesis, effectiveness of biological methods of purifying industrial sewage, USSR study	7058
Petrochemistry and bedrock geology of Fitchville quadrangle, Conn.	18109
Petrography, <i>see</i> Rocks.	
Petroleum:	
agreement with Korea, Republic	18977
Arab, political and economic aspects of oil battle, translation	18436
brines from fields in east Texas, chemical analyses, etc.	11328
bulk storage tanks, railway tank cars, and tank trucks, cleaning	8043
bulk unloadings, deficiencies in customs control, Customs Bureau, Treasury Dept., GAO report	10595
crude oil—	
market demand forecast, monthly	3848
petition for adjustment assistance by Danaho Refining Co.	18994
stocks, mineral industry survey, weekly	3387
crude petroleum and products—	
monthly statement	3849
1962, final summary	1400
effect of growth substance on growth, development, etc., of plants and potato yield, USSR study	8851
exploratory well in Azerbaydzhan, USSR study	5344
extractive industries of Rumania, research results	21502
fertilizers of petroleum origin, USSR study	16026
fractions, extraction of sulfides by conversion to sulfonium salts	13134
growth stimulation factors from, USSR studies	16207
high-sulfur crude oils, Eastern and Western Hemispheres, hydrocarbon-type relationships	21712
hydraulic fracture treatment in Glade and Clarendon oil reservoirs, Warren County, Pa.	14753
industry—	
injury experience, 1963	18663
of Iran	7427
International Convention for Prevention of Pollution of Sea by Oil, amendments, report	10366
international petroleum quarterly	16628
international trade, monthly inventory	3609
lease no. Sacramento 037552-C, reinstate and validate	1868, 2162
leases, timely payment of rentals, report	17835

	Entry
Petroleum—Continued	
lithology and reservoir properties of Big Lime, Keener, Big Injun, Weir, and Berea horizons, Spruce Creek oilfield, Ritchie County, W. Va.	1444
microbiological dewaxing process yielding protein-vitamin concentrates	18798
oil basin in West Siberia, USSR book review	11105
oil deposits in U.S., potential of nuclear explosives as stimulant for hydrocarbon production	13110
oil leases, agreement with Navajo Tribe of Indians, approve, law	262
oil pollution in St. Lawrence Seaway, etc., cooperative arrangements to reduce—	
hearings	17663
reports	10221, 15704
oil resources, eastern Puente Hills area, southern California	10641
oilfield machinery and equipment industry, review of 1963, outlook for 1964	6020
oilfield waters, method of analyzing selenium and tellurium	14756
oilfields, Cow Run sand and Burning Springs pool, Wirt County, W. Va., secondary oil recovery possibilities	14745
Osage Indians mineral reservation, extend for indefinite period—	
law	21124
reports	17571, 17841
plain facts about oil	1532
plants, investment and operating costs, Jan.-Dec. 1963, bibliography	13109
production and refining occupations, employment outlook	9448
products—	
Soviet oil, etc., exports, translations	11214
survey (series)	1432, 5479, 9497, 14741, 20495
progress of East European processing industry	5278
publications, list, 1910-62	21692
recovery, increase by using nuclear explosions, feasibility study	14764
reservoir oil characteristics, New-castle sandstone, Greater Clarendon area, Wyo., areal variation	9507
storage—	
excessive interest expense in price negotiated with New England Tank Industries of New Hampshire, Inc., by Defense Dept., GAO report	6765
Grand Forks, N. Dak., excessive prices, GAO report	19755
USSR area, schematic map for prediction	1327
USSR industry, deficiencies, USSR study	887
waterflood, 5-spot 2 phase flow, principles and computer techniques for calculating performance	1433
waterflood water quality, evaluation by filter methods	11332
waterflooding projects, Allen, Anderson, and Wilson Counties, Kans., 1964	20480
well stimulation and techniques to prevent formation damage in oil and gas production	21690
world oil prospecting, principal results and trends	5199
world statistics, quarterly	4169
<i>see also</i> Naval petroleum reserves—Oil shale—Pipe lines.	

# JANUARY-DECEMBER

	Entry
Petroleum County, Mont., geology	8756
Petroleum products, see Petroleum.	
Petroleum refineries:	
including cracking and reforming	
plants in U.S., Jan. 1, 1964	14742
industry, productivity and technol-	
ogical change (address)	18644
Ufa Order of Lenin Oil Refinery,	
25th anniversary	8905
water requirements of industry	813
Petrography, see Rocks.	
Petrology, see Rocks.	
Pettibone, C. A., control of carbon di-	
oxide content in air-supported	
plastic greenhouse	7891
PF-series	3852
Pfaff's problem, application of meth-	
od in theory of variation of	
astronomical constants	11417
Pflister, Robert D., insect damage in	
grand fir cones	8643
PFM (pulse frequency modulation),	
telemetry, see Telemetry.	
pH, see Hydrogen-ion concentration.	
Phaeocystis pouchetii, see Phyto-	
plankton.	
Phagocytosis, humoral effect upon	
phagocytic defense reaction of	
organism, etc., USSR study	16183
Pharmaceutical Manufacturers Assoc-	
iation, interagency coordina-	
tion on drug research and regu-	
lation, hearings	19598
Pharmaceuticals, see Drugs.	
Pharmacists:	
employment outlook	14692
examination announcement	4392
residences in Public Health Service	
hospitals	9719
Pharmacologists:	
examination announcement—	
amendment	21059
salary adjustments	6099
public health scientist, examination	
announcement	209
Volga conference	9115
Pharmacology:	
benzilic acid, new derivatives, East	
German study	12851
biological activeness of prepara-	
tions made from stag antlers,	
USSR study	10968
characteristics of preparations,	
USSR studies	20174
experiments, USSR studies	20246
neonatal, testimony, hearings	8445
neuropharmacology—	
developments, USSR study	20130
work of Pharmacology Division	
of Institute of Experimental	
Medicine, Academy of Medical	
Sciences USSR	9190
pharmacological advances, USSR	
study	7309
regulation of cell resistance prob-	
lems, scientific conference,	
USSR	21401
Soviet studies	7160
see also Drugs.	
Phase detector, wide range, design	9611
Phase rule and equilibrium:	
columbium-hafnium equilibrium dia-	
gram	16642
hafnium-tantalum equilibrium dia-	
gram	18703
low-temperature phase equilibria of	
natural gas of low helium con-	
tent	18683
rock-forming oxides except water,	
melting points and phase-equil-	
ibrium relations	14343

	Entry
Phase shift:	
normal variations of 18 kc/s signals	
from NBA observed at—	
Boulder, Colo.	11436
Frankfurt, Germany	3052
Maui, Hawaii	9636
tables of electron radial functions	
and tangents of phase shifts	
for light nuclei	18804
Phase shifter, developed at National	
Bureau of Standards	9639
Phase stability, high-frequency, using	
computer to determine	14813
Phase studies, diagram for system	
vanadium pentoxide-zinc oxide	5605
Phase transformations in iron-	
vanadium system, USSR	19867
Phelan, Howard T., computation of	
satellite orbits by Hansen	
method as modified by Musen	5524
Phenacite, continuous flotation, Mount	
Wheeler beryllium ores	9504
Phenogenetic analysis of variability	
in plant populations, USSR	5032
Phenols:	
anti-radiation and anti-oxidation	
properties, USSR study	7343
phenolic laminates, fatigue strength	
under repeated load	12447
Phenomena of pneumatic tire hydro-	
planing	1470
Phenomenological model of thermo-	
phototropism	5525
Phenylketonuria:	
bibliography, 1963	4361
clinical team looks at, problems of	
disease	15830
detection in newborn infant as	
routine hospital procedure	15832
group guidance for parents of child	
patients	13780
Phenophytines, formulation from	
chlorophyll and its analogues	
in darkness and upon illumina-	
tion	5912
Phifer, Bryan, working with low-in-	
come rural families for exten-	
sion agents and specialists	14237
Philadelphia, Pa.:	
electronic computers, regional shar-	
ing plan	140
occupational wage survey	9464
post office, discrimination in pro-	
motions, hearing	2117
principal electric facilities, map	673
railroad accident	878
Philadelphia Naval Shipyard, autom-	
atic data processing system,	
increased costs from ineffective	
use in supply management,	
GAO review	18090
Philately and philatelists, see Post-	
age stamps.	
Philippines:	
agricultural commodities, agree-	
ment	15116
agricultural product supply and de-	
mand, implications for U.S.	
exports	2264
economy, basic data	8816
establishing business	8819
foreign trade regulations	2460
Industrial Development Mission to	
promote machinery exports	14391
labor conditions	13081
labor law and practice	1374
nationals, enlistment in U.S. Navy	
and Coast Guard, inquiry	2115
sailing directions, change	3073
social security coverage for non-	
United States citizen employ-	
ees, agreement	3147
trade in cotton textiles, agree-	
ment	9821

# INDEX 1964

	Entry
Phillip, Warren, electrochemical oxidation of titanium diboride	16715
Phillips, Arthur M., Jr.: trout feeds and feeding	4728
correction	12423
Phillips, John J., site index of New Jersey sweetgum stands, etc.	784
Phillips, Ralph W., FAO, its organization and work and U.S. participation	19744
Phillips, Roland C., comprehensive bibliography of <i>Zostera marina</i>	10579
Phillips, V. Estelle, Air University Library index to military periodicals	3238
Phillips, W. Pelham, parawings as auxiliary lifting devices for supersonic airplane configuration	14879
Philmont Ranch quadrangle, New Mex., rocks and landscape of famous ranch	10647
Philology, <i>see</i> Language and languages	
Philosophers, French Communist, discuss personality cult	7316
Philosophical analysis of a new science	16429
Philosophical aspects of life on molecular level, USSR	1060
Philosophical sciences (USSR periodical): translations	20077
Philosophy:	
complex systems, cybernetics and engineering and social psychology, USSR studies	11015
current problems, USSR articles, cybernetics, problems, USSR study	12898
Feng Ting's Communist life philosophy, review	5128
fighting task of workers	20199
interrelationship of physiology and cybernetics problems, USSR study	5217
man's biological future, USSR study	5374
philosophical problems in sociology and natural science, USSR study	10782
philosophical questions of mathematics, USSR study	14563
social progress and philosophy, USSR study	9328
USSR study	8879
Phipps, Howard M., leaf blight of boxelder attributed to 2,4-D spray drift	18069
Phoenix, David A., geology of Lees Ferry area, Coconino County, Ariz.	798
Phoenix, Ariz.:	
occupational wage survey	14696
principal electric facilities, map	677
Phonocardiography, intracardiac phonocardiogram, experimental, USSR study	18200
Phonograph records:	
industry, review of 1963, outlook for 1964	6025
trade practice rules for industry	10713
Phonographs:	
and record player attachments, current industrial reports	17094
Federal item identification guides for supply cataloging	12296
supplements	3477
Phonorecords:	
cataloging, Library of Congress rules	11307
Library of Congress catalog	14718
Phony peach disease, control	18651
Phosphate rock, <i>see</i> Rock phosphates	7927
Phosphate slimes, Florida, electro-dewatering tests	18127

	Entry
Phosphates:	
Florida, variable thickness, bedded deposits, application of statistical analysis in evaluating data	20502
Idaho Phosphoria formation, statistical analysis of sample and assay data from bedded deposits	9518
industry, western, and its resources, evaluation, introductory review	16636
mining leases, increase acreage limitation for single individuals or corporation—	
hearing	14145
law	17406
reports	17558
petrographic study and classification of western phosphate ores	14750
sale of rights in Florida to record owners of surface, report	488
superphosphates—	
and other phosphatic materials, current industrial reports, summary 1963	10059
current industrial reports	3390
western field, Permian rocks, geology (series)	15946
<i>see also</i> Pyrophosphates	
Phosphoria formation:	
Idaho, statistical analysis of sample and assay data from bedded deposits	9518
Snowdrift Mountain, southeastern Idaho, minor elements in bedrock soil, etc.	801
Phosphoric acid, high-toxic organic esters analysis, Hungarian study	5257
<i>see also</i> Dichloroanhydride of B-chloroethylphosphonic acid	
Phosphorus:	
nitrogen and precipitation interrelationships on production of bromegrass-crested wheatgrass hay	5858
organic insecticides—	
toxicity and industrial hygiene, USSR study	6944
toxicology, USSR study	2818
polymers, containing USSR study	20242
Phosphorus anhydride, irradiated with neutrons for production of phosphorus 32, Yugoslav study	11210
Phosphorus isotopes:	
phosphorus 32, production, from $P_2O_5$ , irradiated with neutrons, Yugoslav study	11210
radioactive, labeling flies and mosquitoes, USSR study	2554
Phosphorus pentoxide, <i>see</i> Phosphorus anhydride	
Phosphorylation, photosynthetic, chemism of, USSR study	18482
Photoelasticity:	
coatings, determination of stresses and deformations in flexible plates and shells	14925
materials, static and dynamic properties	5596
Photoelectric cells, gallium arsenide photovoltaic device, new method used to fabricate	14819
Photogeology:	
Chichagof and Krusof Islands, Alaska	6795
procedures and studies (series)	6795
Photogrammetry, <i>see</i> Photographic surveying	

	Entry		Entry
Photographers:		Photovoltaic cells, <i>see</i> Photoelectric cells.	
employment outlook-----	9405	Phreatophytes:	
medical—		control in Pecos River Basin—	
examination announcement-----	15356	law-----	19402
VA positions-----	15360	report-----	15494
photographer's mate 1 & C, Navy training course-----	20697	vegetation, guide for surveying-----	9933
Photographic apparatus and supplies:		PHS, <i>see</i> Public Health Service.	
Federal item identification guides for supply cataloging-----	12294	Phthisis, <i>see</i> Tuberculosis.	
supplements-----	3475	Phyllosilicates, <i>see</i> Iron phyllosilicates.	
ground cameras and photo lab equipment-----	20949	Physical aspects of irradiation, recommendations of ICRU-----	9632
Japanese industry, development, 1962-----	6001	Physical chemistry:	
light box for photographing fish and invertebrates at sea-----	4732	dynamics of physical-chemical systems in mammals-----	21738
market in United Kingdom and France-----	19279	molten salts and slags, all-Union conference-----	5954
<i>see also</i> subjects.		Physical constants:	
Photographic study of boiling flow-----	8063	international system of units, adjusted-----	20340
Photographic supply stores, <i>see</i> Stores.		recommended by NAS-NRC, adopted by NBS-----	5545
Photographic surveying:		Physical culture, <i>see</i> Physical education and training.	
development of photogrammetry in Soviet Union-----	10777	Physical education and training:	
rodent population, experiment in large-scale mapping, USSR study-----	1239	health-resort therapeutic physical culture, USSR studies-----	14462
tidal current surveys-----	4407	medical control and therapeutic physical culture-----	18383
Photographs:		State school laws and regulations-----	17924
catalog of copyright entries-----	10441	theory and practice of physical culture, USSR studies-----	21442
copyrighted-----	19609	USSR studies-----	20070
NASA photography from five years of space-----	7476	Physical examinations:	
use speeds inspection of printed-circuit boards-----	16672	alien medical examination program of Public Health Service, study-----	2115
Photography:		health examination survey for children 6-11 years-----	13400
fast, use for detection of transverse modes of ruby lasers-----	19165	medical control and therapeutic physical culture-----	18383
high speed, formation of detonation waves in stoichiometric hydrogen-oxygen mixture, investigation-----	11393	medical follow-up on athletes training, USSR study-----	7340
of shock waves, inospheric temperatures-----	20963	military service, report on young men found unqualified-----	7678
operational documentary, reactors, manual-----	8058	your child and health examination survey-----	9736
photographic dealers and studies, bibliography-----	20787	<i>see also</i> Premarital examinations.	
photographic measures of double stars-----	9668	Physical fitness:	
space photography-----	7186	boys, vigor, complete exercise plan-----	11539
<i>see also</i> Aerial photography—Color photography.		fatigue, mitigation with spartase-----	4314
Photolization, <i>see</i> Ionization.		fitness for leadership-----	18881
Photometry:		girls, vim, complete exercise plan-----	11540
absolute, of night sky, zenith intensity of Haleakala, latitude N 20.7° and at Fritz Peak, latitude N 39.9°-----	14939	publications, list-----	18885
photometric properties of lunar crater floors-----	18796	Physical Fitness, President's Council on, <i>see</i> President's Council on Physical Fitness.	
projector tests at National Bureau of Standards-----	3049	Physical geography:	
Photomultiplier, modulation of amplification factor in measurement of weak light fluxes-----	7563	Bulgaria-----	5040
Photons, interference properties-----	4230	physiographic and hydraulic studies of rivers (series)-----	10642, 12510
Photosphere, solar, magnetic field gradient determination-----	7564	Physical measurements:	
Photosynthesis:		and financial calculations—	
chemism of photosynthetic phosphorylation, USSR study-----	18482	farmers' handbook-----	7911
participation of xanthophylls in oxygen transfer, USSR study-----	12861	physical measurements, handbook, errata-----	13579
photosynthesizing bacteria, USSR study-----	10939	Physical medicine, <i>see</i> Medicine.	
primary production of bodies of water, errata-----	11852	Physical research, AEC program, hearings-----	8235
radioisotopes uses, bibliography-----	15283	Physical sciences, <i>see</i> Science.	
thermodynamics, USSR studies-----	16411	Physical survey manual, dental X-ray-----	20767
Photosynthetic gas exchanger, <i>see</i> Gas exchangers.		Physical therapists, employment outlook-----	13051
Phototropy, <i>see</i> Thermophototropism.		Physical therapy:	
		health-resort physiotherapy, USSR studies-----	14462
		techniques and methods-----	979
		USSR—	
		new apparatus-----	2648
		physiotherapy in cosmetics-----	2792
		<i>see also</i> Therapeutics.	



# INDEX 1964

	Entry
Physically handicapped, <i>see</i> Handicapped.	
Physicians:	
Air Force medical and dental officers, relief—	
law	8222
reports	377, 8409
Armed Forces appointment and residency consideration program, information bulletin	15826
aviation medical examiners—	
guide	19270
list	10041
civilian care of dependents of uniformed services, manual	2254
employment outlook	9397
medical groups, United States, 1959	5658
mental health in child health conference, attitude study project evaluation	17117
Soviet physicians in Yemen	20407
student loans, amend Public Health Service act to permit partial cancellation for practicing in shortage areas, reports	4533, 17582, 17609
USSR, Communist indoctrination and medical training of doctors	9196
<i>see also</i> Osteopathic physicians.	
Physicists:	
career opportunities, building tomorrow's weather systems	15150
employment outlook	9406
public health scientist, examination announcement	209
research opportunities, examination announcement	8156
Physics:	
abstracts pertaining to Communist China in Soviet journals	2868
atmospheric, journal of research, National Bureau of Standards	3631
East European journals, abstracts	968, 1175, 1346, 2496, 2631, 2741, 2764, 2803.
East European scientific abstracts	4967, 5231, 6888, 7012, 7025, 7113, 7195, 7207, 8860, 9026, 9077, 9133, 9162, 9171, 9309, 9369, 11063, 11185, 12588, 12643, 12782, 12874, 12998, 13020, 14423, 14434, 14469, 14596, 16014, 16100, 16221, 16274, 16368, 16540, 18369, 18402, 18428, 18433, 18554, 19858, 20064, 20126, 20335, 21431.
electron emission and electron tube technology	7905
engineering, journal, translations, USSR	5320, 5327, 8979, 9004
fundamentals of magnetic water treatment, USSR study	16472
high-temperature thermodynamics and thermophysics, USSR study	10763
journal of research, National Bureau of Standards	3628, 13269
luminescence, ionization, and radiation, USSR studies	12799
mathematical, journal of research, National Bureau of Standards	3629, 13270
physico-chemical research, USSR studies	7030
planetary	14779-781
atomic properties, transition probabilities, expansion method for calculating	16655
problems of physics of the atmosphere, translation	7565

	Entry
Physics—Continued	
reactor shielding, USSR studies	16145
research and development, opportunities, examination announcement	11949
research, summaries of projects supported by AEC	11866
semiconductors and metals, USSR study	20303
solar flares, AAS-NASA symposium	20537
solid state, summaries of AEC basic research programs	5984
Soviet and Chinese articles, English abstracts	3439
superconducting alloys, USSR study	20391
engineering physics journal translations	2689, 2921, 7194
progress in physics, Apr. 1964	12875
scientific abstracts	1006, 2732, 5170, 9036, 12550, 16245, 20056, 20115, 20343-344, 20365, 21394, 21619, 21642, 21646.
studies	16442
<i>see also</i> Plasma—Nuclear physics—Radio engineering—Radiophysics.	
Physics Department, Hungarian Academy of Sciences, report of leadership, 1963	12586
Physiography, <i>see</i> Physical geography.	
Physiological instrumentation system, Hughes microminiaturized instrumentation system evaluation	1728
Physiological mechanism of human organism and methods of studying them, USSR	10803
Physiologists:	
examination announcement, amendment	21055
public health scientist, examination announcement	209
Volga conference	9115
Physiology:	
act of attention, USSR study	5206
aerospace, field neon solubility determination in water and extracted human fat	13650
aging, OTS bibliographies	11661, 13491
analysis of effects of preceding muscular efforts on working capacity of unfatigued muscles, USSR study	16271
basis for new forms of labor under conditions of technical progress, USSR study	12938
clinical—	
and methods of functional diagnosis of kidneys, USSR study	20059
circulation, outline	14912
cosmonauts, reactions during action of G-loads, etc., USSR study	9191
cybernetics—	
interrelationship, philosophical problems, USSR study	5374
use, USSR articles	9023
effects of exposure to increased oxygen tension at 5 p.s.i.a.	5895
electrophysiologic characteristics and interpretation of skin potentials	5905
electrophysiology—	
action of piridrol on central nervous system, USSR study	20108
nervous system, USSR study	20183
evaporative water loss, measurement	13727
gatherings in East Europe	18237
gibberellins activity, compared to activity, etc., of molecule, USSR study	20370

	Entry		Entry
Physiology—Continued		Piegan unit, <i>see</i> Blackfeet Indian project.	
hemoglobin, comparative, USSR translation	18517	Pieper, Heinz P., catheter-tip flow-meter for measurement of coronary arterial blood flow, etc.	17011
human and animal, USSR studies	21477	Pierce, A. P., uranium and helium in Panhandle gas field, Texas, and adjacent areas	6807
human water requirements, effect of ventilating air flow	1744	Pierce, Charlie M., effects of radiation and radiolotopes on life processes, bibliography	11865
modern problems in studies of instincts, USSR translation	2598	Pierce, Margaret H.: cases decided in Court of Claims—	
pathological, USSR translations	7335	July 19–Dec. 31, 1961	6531
physiological effects of gases encountered at elevated pressures, safe use of respiratory protective equipment	18706	Jan. 1–Mar. 31, 1962	12286
physiology and therapy, USSR studies	20223	Apr. 1–June 30, 1962	12287
plant physiology of Soviet East, USSR study	20221	July 1–Oct. 31, 1962	19611
plants, radiolotopes uses, bibliography	15283	Pierce, Idaho, Idaho batholith	4785
reactions of animals during flights of spaceship-satellites, USSR study	21481	Pierce County, Wash.: cleaning trials on coals, washability studies	21711
reactions to irradiation etc., and use of biotelemetry, USSR studies	10921	coal study of Wilkeson area	5498
Rumanian research during 15 years of Republic, translation	936	Pierre shale, <i>see</i> Shale.	
surface immersion hypothermia, studies, summaries	8044	Piersol, Allan G., measurement and interpretation of ordinary power spectra for vibration problems	20523
use of cybernetics	2745	Pietura, Regina, <i>see</i> Shore, Diedre R.	
USSR—		Piezoelectricity, effect of nepheline-containing rocks, USSR study	14467
physiological research	19973	Pig iron, <i>see</i> Cast iron.	
plant physiology from standpoint of microbiology, book review	5408	Pig tin, <i>see</i> Tin.	
research	5336	Pigeons:	
studies	8886, 10761, 10865	hunting, possession, transportation, importation, Federal regulations, 1964–65	15925
Physiotherapy, <i>see</i> Physical therapy.		mourning dove status report, 1963	6730
Phytogeography:		Pigment particle size separation	14787
discussion of 3 Soviet books on geobotany	5410	Pigments, iron oxide, minerals year-book chapter	18672
forage geobotanical maps and principles involved in making, USSR study	2774	Pignatti, Terisio, eighteenth century Venetian drawings from Correr Museum	3054
geobotanical mapping, USSR study	16025	Pigs, <i>see</i> Swine.	
phytophysognomic reconnaissance of Barro Colorado Island, Canal Zone	3130	Pihlainen, John A., muskeg and its associated engineering problems	8514
Phytoplankton, ecology of phaeocystis pouchetii, USSR study	1145	Pillowcases, current industrial reports	11901
PI series, Post Office Department	16816, 20730–731	Pillsbury, Lake, sedimentation	6815
Picard, Adrien D.: occupational wage survey—		Pilot guides, <i>see</i> Coast pilots.	
Charleston, W. Va.	14699	Pilot-scale fluidized-coal feeder utilizing bone fluidization	10638
Detroit, Mich.	11284	Pilots and pilotage, services on Great Lakes and St. Lawrence River, agreement with Canada	3162
Picatinny Arsenal, Dover, N.J., Feltman Research Laboratories technical memorandums	13369–370	<i>see also</i> Astronauts—Aviators.	
Picaza, Jorge A., relief	14034, 21112	Piltz, Albert, science equipment and materials, science kits	603
Pickel, W. H., relief	12037, 12174, 13856	Pima County, Ariz., convey lands to Edward O. Earl	15480
Pickett, J. M., intelligibility of excerpts from fluent speech, effects of rate of utterance and duration of excerpt	17003	Pima Indians:	
Pickles and relishes, making at home	5828	transfer lands to Salt River Pima-Maricopa Indian Community—	
Pickleworms, how to control on cucumbers, squash, etc.	11766	law	17324
Pickling (metals):		reports	12108, 15179
manganese extraction using ferrous sulfate and pickle liquor	13128	Pinal County, Ariz.: geology of Christmas quadrangle	19774
Picnic table for children	8636	ground-water conditions in Rainbow Valley and Waterman Wash areas	4814
Pictured Rocks National Lakeshore, establish, hearing	17879	Pinchot, Gifford, National Forest, <i>see</i> Gifford Pinchot National Forest.	
Pictures, television, area properties	17006	Pine:	
Picuris Pueblo, young hunter of		Australian <i>Pinus radiata</i> , ten-year performance of California planting of progenies	12466
Picuris, story	839	Austrian, height-age curves in windbreaks on loess soils of Nebraska	783
Piedmont National Wildlife Refuge, general information	6722	development of young western white pine plantations	18063
Piedmont region, floods, relation of channel geometry of streams	10642		

# INDEX 1964

	Entry		Entry
Pine—Continued		Pine—Continued	
eastern white pine—		slash—	
blister rust infection hazard,		and longleaf, seed production, in-	
relationship to climate.....	6742	sects affecting.....	8691
chlorotic dwarf disease, effect		cone and seed insects, hydraulic	
duplicated by artificial defoli-		spray applications of insecti-	
ation.....	8635	cides for control.....	18084
jack, 22 year results of precom-		controlling shrubs on wet sites..	8670
mercial thinning experiment.....	18066	southern—	
limber pine, blister rust found		repellent-treated seed, germina-	
in northern Wasatch Moun-		tion before and after storage..	8668
tains.....	16935	root-pruning in nursery.....	2391
loblolly—		Virginia—	
comparison in Virginia Piedmont,		comparison	
five-year effects from row thin-		response to release, 1st-year re-	
ning in plantations of eastern		sults.....	2384
Maryland.....	8676	western pine beetle damage on Fre-	
stands in eastern Maryland, con-		mont National Forest, survey..	2395
ditioning for regeneration.....	787	western white, self- and cross-po-	
tip-moth control fails to improve		lination comparison of height	
height in Maryland study.....	8652	growth of progeny.....	18065
loblolly and shortleaf, growing in		white—	
mid-South.....	19067	blister rust mortality in planta-	
lodgepole—		tions, reduced by early prun-	
Colorado and Wyoming, volume		ing.....	8646
tables and point-sampling fac-		comparison in Virginia Pied-	
tors.....	12481	mont.....	2381
regenerating in central Mon-		eastern, silvical characteristics..	8677
tana following clear cutting..	18062	evaluating and scheduling weevil	
regeneration slash disposal and		control in northeast.....	14330
cone opening, study.....	14319	growing to avoid blister rust, new	
yield tables.....	8686	information, 1964.....	12460
longleaf—		root rot damage at Chittenden	
seed dispersal.....	2387	Nursery.....	773
seed losses to animals on burned		white-pine cone beetle, description,	
seedbeds.....	18075	control, etc.....	18043
seedlings, development under		Pine Ridge Reservation, Oglaia Sioux	
parent trees.....	8693	Tribe of Pine Ridge Reserva-	
longleaf-slash forest lands, forage		tion, convey lands in trust to	
and cattle management.....	13583	laws.....	246, 249
Monterey, diseases.....	19750	Pinecrest, Calif., real property ac-	
pattern of variation of fibril angle		quisition practices and adequacy	
within annual rings of Pinus		of compensation, hearings.....	15603
attenuradiata.....	18053	Pink bollworms, diapause, induce-	
plantations on eroded sites in		ment factors.....	7952
northern Mississippi, early		Pinkard, Mary, labor law and practice	
yield.....	2385	in Haiti.....	2958
ponderosa—		Pinnacles National Monument, general	
dominant pines do respond to		information.....	16769
thinning.....	8658	Pinon, juniper type of Arizona, effects	
reproduction, dwarf mistletoe con-		of grazing, fire, and tree con-	
trol opportunities.....	6739	trol.....	16969
rock mulch and scalping, ef-		Pins, see Safety pins.	
fects.....	781	Pinson, J. D., lubrication requirements	
southwestern point-sampling		for space environments.....	4253
factors.....	790	Pinus attenuradiata, see Pine.	
transplants, root development..	14326	Pinus radiata, see Pine.	
ponderosa and sugar, grading saw		Pinus strobus, see Pine.	
logs in trees, improved sys-		Pinyon, see Pinon.	
tem, guide.....	14306	Ploche mining district, Nev., Cam-	
pulpmill possibilities in north		brian rocks.....	19789
Alabama.....	16892	Pioneer, see Satellites.	
red—		Pioneer (USC&GSS):	
ground preparation and planting		International, Indian Ocean Ex-	
costs in southwestern Wis-		pedition, operations, etc.....	6110
consin.....	775	Pipe, Peter, introduction to dental	
heavy crop of cones yields many		public health, self-instruction	
thousands of good seeds.....	6747	course.....	15057
soil moisture and radial incre-		Pipe and pipe fittings:	
ment.....	777	acrylonitrile-butadiene-styrene plas-	
soil moisture-thinning relation-		tic pipe, standard of trade.....	5541
ships under stands in northern		cast iron soil pipe from Australia,	
Minnesota.....	776	determination of no injury or	
seedling grades, and seedbed density		likelihood thereof to U.S. in-	
in California nurseries.....	8667	dustry.....	11654
seedlings, care used in breeding at		Federal item identification guides	
Institute of Forest Genetics..	2386	for supply cataloging.....	12292
shortleaf—		supplements.....	8475
burning does not control young		hydraulic power transmission equip-	
hardwoods in Cumberland and		ment, cleaning and protecting	
Plateau.....	14308	piping, military standard.....	10450
comparison in Virginia Piedmont..	2381	identification of pipe liner for air-	
estimating sound seed per cone..	18074	craft, missile and space sys-	
regeneration in Kentucky, value		tems, military standard.....	21255
of bulldozing.....	2388		

Entry	Entry
Pipe and pipe fittings—Continued	Pith, flecks in sugar maple veneer
large size pipe production from	logs, grading----- 12459
Okh1ONZOT2 stainless steel,	Pitman, A. L., sulfate cycle for carbon
USSR study----- 2812	dioxide removal and oxygen
polyethylene plastic pipe, standard	generation----- 13340
of trade----- 5542	Pittman, M. E., homogeneous mag-
polyvinyl chloride (PVG) plastic	netic fields----- 7511
pipe, standard of trade----- 5543	Pittman act, <i>see</i> Reclamation of land,
reinforced concrete pipe culverts,	Pittsburgh, Pa.:
criteria for structural design	occupational wage survey----- 11279
and installation----- 1571	principal electric facilities, map--- 673
service pipe requirements by water	PKU, <i>see</i> Phenylketonuria.
utilities, 1950-80----- 19280	PL 480 newsletter----- 3679
Pipe fitters:	placement, <i>see</i> Child placing.
employment outlook----- 9423	Plain facts about oil----- 1532
supervisory jobs in steamfitter	Plan for development of land and
trade, examination announce- ment----- 6088	water resources of southeast river basins, etc----- 6375
Pipe lines:	Plane coordinates, <i>see</i> Coordinates.
gas distribution, engineering man- ual, change----- 4669, 19657	Planet of Man Exposition, <i>see</i> Inter- national Exposition for South- ern California, 1968.
natural gas--	Planetary physics----- 14779-781
map----- 6642, 10523, 21304	expansion method for calculating atomic properties----- 16655
sales by producers to pipeline companies, 1962----- 12392	Planets:
oil--	atmospheres--
transport statistics, 1962----- 4881	containing water vapor, settling time of fixed amount of oxy- gen----- 1480
transportation revenue and traf- fic----- 4092	flow properties of thermally per- fect carbon dioxide and nitro- gen mixtures, tables----- 11361
Poland, Druzhba oil pipeline, pros- pects for development of chem- istry----- 5157	radiative equilibrium----- 18742
watershed protection and flood pre- vention projects, utility reloca- tion costs, report----- 6489	gravitational field, simulation, tech- nique----- 21774
Pipelines, <i>see</i> Pipe lines.	inner, structure and strength----- 9616
Pipestone National Monument, gen- eral information----- 11469	interplanetary missions, utilizing 1st generation nuclear stages, parametric performance analy- sis----- 21759
Pirhalls, Ferdinand F.:	perturbations, modification of Hill's method----- 14897
basic data on economy of Rumania- foreign trade of Czechoslovakia, 1948-62----- 6859	polarization of light from planets and some terrestrial sub- stances, research study----- 16727
Piridrol, electrophysiology of action on central nervous system, USSR study----- 20108	polarization of their light, study-- probes----- 16728
Pirritano, Nina M. C., relief----- 2181	angle-of-attack convergence of spinning bodies entering at- mospheres at large inclinations to flight path----- 21777
Pisciculture and fishing (USSR pe- riodical):	theory of tumbling bodies enter- ing atmospheres----- 14905
translations----- 18421	radar, paramagnetic amplifier, USSR study----- 7244
Pistol practice, <i>see</i> Target practice.	research, bibliography----- 5872
Piston rings, wear radiolotopes mea- surements applications----- 1777	simultaneous computation of sec- ular and resonance effects in motion of celestial bodies----- 13223
Pistrang, Marvin A., geologic and hydrologic reconnaissance of Furnace Creek Wash area, Death Valley National Monu- ment, Calif----- 21361	surfaces, application of penetrom- eters to study of physical prop- erties----- 18748
Pitch (aircraft):	transit times, manually recording, measurement of errors----- 18761
afterbody sting diameter effect on aerodynamic characteristics of slender bodies at mach num- bers 1.57 to 2.86----- 1465	Plankton:
characteristics of full-scale fan-in- wing model with nose-fan pitch control----- 18737	copepods, procedure for calculating production, USSR study----- 1055
damping in pitch, blunted cone, ef- fect of changes in base con- tour----- 1472	planktonic foraminifera from deep- sea cores off Eniwetok Atoll----- 15945
Pitch (motion):	primary production of bodies of water, errata----- 11852
controllable pitch propellers and ship design, USSR study----- 14488	records and observations from grid studies off Baja California, Apr. 1952----- 4740
space environment, variation due to fuel sloshing in rectangular tank----- 14869	<i>see also</i> Zooplankton.
spinning symmetric missile governed by arbitrarily nonlinear re- storing moment----- 9575	Planned-unit development with homes association----- 6636, 19685
VTOL, interference effects of single and multiple round or slotted jets on model in transition----- 16697	Planning (economics), <i>see</i> Economic policy.
wing-body combination leading-edge sweep, effects of spanwise vari- ation----- 9596	Planning farm for profit and stabili- ty----- 4199
Pitch (music), <i>see</i> Musical pitch.	Plant City quadrangle, economic geol- ogy----- 799



# INDEX 1964

	Entry
Plant diseases, <i>see</i> Diseases of plants.	
Plant life, small and microscopic, USSR studies	2895
Plant pathology, <i>see</i> Diseases of plants.	
Plant physiology, <i>see</i> Physiology.	
Planting, <i>see</i> Forest planting—Tree planting.	
Plantings, <i>see</i> Crops.	
Plants, Kenneth D., gasification of bituminous coal with oxygen in pilot plant, etc.	7443
Plants:	
accumulation of cesium concentration, effect	4970
Barro Colorado Island, Canal Zone, phytophysiological reconnaissance	3130
cells, USSR studies	7201
cultured, instructions for testing and application of gibberellins	20330
effect of radioactive fallout, USSR study	9231
extracts, use in serological studies of fish	10574
genetics, radiolabels uses, bibliography	15283
green, energy metabolism, USSR study	14420
growth, effects of ammonia distribution in soil	12733
house, insects and related pests, how to control	20920
interrelationship between super-faint chemoluminescence and heat resistance	9009
inventory, material received by New Crops Research Branch	15200
ionizing radiations effects	1769
irrigation, soil-plant-water relationship	11612
Miocene floras from Fingerrock Wash., southwestern Nevada	18134
new varieties created in Rumania	16032
nursery products, production and sales, 1962 and 1963	15130
nutrient and fertilizer consumption, 1962	1678
nutrition, fertilization and seed treatment, USSR studies	11163
physiology, radiolabels uses, bibliography	15283
plant cover of Siberia and Far East, scientific coordination conference report	2558
plant physiology and pathology and agronomical problems of Soviet East, USSR study	20221
potted mediums and composts, preparing	20903
protection through biophysics, USSR study	2802
publications, price list	16825
quarantine import requirements—	
American Samoa	15201
Ceylon	9923
Denmark	15202
Germany, Federal Republic	9924
Italy	19058
Peru	15203
St. Kitts and Nevis	9925
St. Lucia	13573
Sweden	19059
Uruguay	16939
quarantine notices under Plant quarantine act, P.P.C. series	19060
selection and breeding, Soviet agricultural applications	3828
sulfur as nutrient	2683
upper Paleocene floral zones and provinces of U.S.	5862
	8771

	Entry
Plants—Continued	
variability in populations, phenogenetic analysis, USSR study, western Pacific, conference on joint investigations, USSR study	5032
wildland, California electronic data processing codes	7172
woody, meristems, growth and development	8661
yield, effect of growth substance of petroleum origin, development, and physiological changes, USSR study	42
<i>see also</i> Aquatic plants—Diseases of plants.	8851
Plants (Industrial):	
flexibility of operation in dairy manufacturing plants, changes, 1944-61	21258
improved management, all-Union review, USSR industrial development, translation	16310
metallurgical, technical progress and trends in utilization of fuels, USSR study	8947
modernization (address)	6117
new, manufacturers' expenditures	10045
plant tours for international visitors to United States	7826
prospects, information sources for locating	15256
safeguarding classified information, security manual	10446
safety design considerations for layout of facilities, placement of equipment, and production processes (remarks)	14682
small plants, cutting office costs	13446
small, profitable layout	20790
under USDA inspection, processed fruits, vegetables, etc., list	13558
United Arab Republic, war plants' production, translation	2526
Plantz, Merritt A., soil survey of Hooker County, Nebr.	7747
Plasma:	
anisotropic, semi-infinite, transient reflection and transmission of plane wave	19170
antenna pattern distortion produced	17008
bonding mechanism between plasma-sprayed tungsten and stainless steel substrate, analysis	20593
coll-system design parameters for constant-velocity traveling magnetic wave plasma engine	13228
cold—	
collisionless atomic hydrogen, electromagnetic wave propagation	11379
secular and non-secular behavior for equations	13233
electrodeless gun, study of structure of plasmoids generated	5966
environment, radiation from slotted conducting plane theory	20641
excitation functions, ion-production rate for helium plasma	13241
excitation of electrostatic oscillations in magnetic field	13698
expanding cylindrical, interaction with external magnetic field	20626
expanding in vacuum in presence of magnetic field, deceleration and energy conversions	16733
frequency ranges for existence of waves in cold, collisionless hydrogen plasma	11403
hydrodynamic wave tube	1738
instability of positive column in axial magnetic field	16731

	Entry
Plasma—Continued	
interplanetary, detector-analyzer for studying.....	7520
isotropic inhomogeneous slab, plane electromagnetic waves passing through at arbitrary angles of incidence, generalized treatment.....	14901
kinetics including radiation in external magnetic field, solution of equations.....	13699
layer, antenna pattern distortion, experimental determination.....	9971
modern research methods.....	11856
molecular collision processes survey.....	7493
nitrogen afterglow, probability of collision for momentum transfer of slow electrons in.....	20526
nonequilibrium—	
expansion from thermionic source.....	1477
spectral density of radiation scattered, calculation valid for all wavenumbers.....	13697
physics and hydromagnetics.....	9969
physics, and problems of controlled thermonuclear synthesis, reports of conference, Kharkov, June 25-July 2, 1959.....	19227
radiation from slotted-cylinder antennas in reentry environment.....	7544
sheath on hypersonic blunt-nosed cone, calculated, ratio attenuation.....	3021
slabs, resonant interaction with electromagnetic waves.....	20602
stark profile measurement of Lyman- $\alpha$ and Lyman- $\beta$ lines.....	5608
three-body collisional recombination of cesium seed ions and electrons in high-density plasmas with argon carrier gas.....	21752
time-dependent medium for nonlinear interaction of electromagnetic wave.....	13638
variable mass, electromagnetic acceleration.....	21762
Plasma (blood), <i>see</i> Blood.	
Plasmoids, generated by electrodeless plasma gun, study of structure.....	5966
PLASTEC notes.....	2255, 4608
PLASTEC reports.....	564, 6551, 12305, 17897, 19619
Plasterers, employment outlook.....	9422
Plastic coating, hydrophobic and oleophobic fluoropolymer coatings of extremely low surface energy.....	13341
Plastic film, reflective surfaces reproduced from masters.....	20558
Plastic sheets, <i>see</i> Sheet-plastics.	
Plastic surgery, <i>see</i> Surgery.	
Plasticity:	
beryllium of different purity, deformation and destruction, USSR study.....	18604
iron-nickel-chromium base alloys, electrosilic remelting effect, USSR study.....	1014
operator variance in determination of plastic limit.....	8508
plastic thermal stresses and strains in finite thin plate of strain-hardening material, analysis.....	21764
Plastics:	
expanded, OTS bibliography.....	11660
fiberglass-reinforced test data, helicopter rotor blade applications.....	13495

	Entry
Plastics—Continued	
fibrous reinforcement for portland cement.....	14201
filament-winding, molecular structure and tensile properties.....	18862
filament wound motor cases, problems in military applications.....	2255
fluidized-bed coating, technology, military applications.....	6551
foamed—	
conference proceedings.....	11657
cryogenic waveguide window sealed with.....	14817
gears, feasibility for use in ammunition items, memorandum.....	17897
glass reinforced coatings for propeller shafting, Navy instruction manual.....	9763
laminates—	
fibrous glass reinforced Ships Bureau inspection manual.....	16854
errata.....	20780
list of publications.....	18047
reinforced effect of elevated temperatures on strength properties.....	7955
reinforced with unwoven glass fibers—	
evaluating shear strength.....	18052
evaluation methods.....	12445
materials—	
industry review of 1963, outlook for 1964.....	6004
trade of United States, Western Europe, Canada and Japan, 1961-62.....	14392
mechanical properties, predetermining by empirical method.....	14823
PLASTEC notes.....	2255, 4608
PLASTEC reports.....	564, 6551, 12305, 17897, 19619
radiation resistance, USSR studies.....	18304
reinforced, for flight vehicles, military handbook.....	14163
shallow-draft plastic launch, description, USSR study.....	9060
shaping and treating, classification bulletin.....	9692
shipments of selected products, 1962, current industrial reports.....	4348
stocks for M14, 7.62mm rifle, 1 year tropical exposure test.....	11527
subject index, bibliography, and code description of technical conference papers, Feb. 10, 1962-Feb. 10, 1963.....	564
technical conference papers, subject index, bibliography, and code description.....	19619
tensile strength, high-rate, computation from static strength data.....	10482
tooling, materials, techniques, tool design.....	12305
U.S. production and sales preliminary report.....	3863
use in blood banks and in medical practice USSR study.....	1338
use in surgery USSR.....	2858
vacuum forming thermoplastic sheet results in low-cost casting patterns.....	9543
wood-plastic combinations preparation using gamma radiation to induce polymerization.....	8066
<i>see also</i> Polystyrene— <i>also</i> names of articles made from plastics.	
Plastics Technical Evaluation Center:	
PLASTEC notes.....	2255, 4608
PLASTEC reports.....	564, 6551, 12305, 17897, 19619

# INDEX 1964

	Entry		Entry
Plates:		Plotting boards and plotting:	
circular, buckled, frequencies and		automatic, spin-wave instability	
modes of vibration-----	7568	threshold data-----	19158
circular plates on elastic, sealed		plotting circles of constant over-	
foundations-----	8509	pressure around targeted	
fin-plate interference model, heat		points, program-----	21786
transfer and pressure investi-		Plowback program (management im-	
gation at Mach number of 6---	16679	provement):	
flat, heat transfer measurements		improvements reported---	
in turbulent boundary layer---	20589	Jan. 1-June 30, 1963-----	1759
flexible determination of stresses		July 1-Dec. 31, 1963-----	11838
and deformations by photo-		Plowshare program (civil, industrial	
elastic coatings application---	14925	and scientific uses for nuclear	
heated, finite length, flow and heat		explosives)-----	118-123, 4298,
transfer in free-molecule flow		5979-81, 10037, 17063, 21013	
environment-----	21766	AEC, 1965, hearings-----	8235
orthotropic, containing crack, elastic		report 1963-----	11873
stress distribution-----	9607	Plugs, disconnect, circuit reliability	
plastic thermal stresses and strains		boosted by soldering pins to	
in finite thin plate of strain-		sockets-----	9563
hardening material, analysis---	21764	Pluhowski, E. J., hydrology of Baby-	
stresses when pushing through draw		lon-Islop area, Suffolk County,	
plate, USSR study-----	2809	Long Island, N.Y.-----	18147
thermal midplane stresses, finite		Plum Brook reactor, <i>see</i> Reactors	
differences energy method eval-		(atomic).	
uation-----	18767	Plumbago, <i>see</i> Graphite.	
thickness, geometric effects-----	9761	Plumbers, employment outlook-----	9423
<i>see also</i> names of metals, etc., of		Plumbers' supplies:	
which plates are made.		current industrial reports, sum-	
Platforms (political), <i>see</i> Political		mary 1963-----	19296
parties.		plumbing fixtures-----	
Plating, titanium, applying coatings		current industrial reports-----	3391
on, USSR study-----	9187	vitreous china, standard of trade	5539
Platinum:		Plumbing:	
electrode, triiodide/iodide reaction,		equipment, Federal item identifi-	
kinetic relations-----	7653	cation guides for supply cata-	
metals report, mineral industry		logizing-----	12292
survey, quarterly-----	3851	supplements-----	3473
platinum-group metals, 1963---	20496	national plumbing code, proposed	
surface, use in study of autophobic		revision-----	9725
fluids-----	20709	repairs for home and farmstead---	19072
Plato, Chris C., relief-----	17174	Plumbing fixtures, <i>see</i> Plumber's sup-	
Platsky, David, automobile ownership		plies.	
by aged persons in U.S.-----	20799	Plumbism, <i>see</i> Lead poisoning.	
Platt National Park, general infor-		Plumbs, calculation of plumb-line de-	
mation-----	16770	flections on basis of gravity	
Platte Canyon quadrangle, Colorado,		anomalies, USSR study-----	902
geology-----	12507	Plums, production, use, value, by	
Platte County, Wyo., hydrologic con-		States, 1962-63-----	15129
ditions in Wheatland Flat		Plutonium:	
area-----	19804	alloys, USSR study-----	4913
Platte River and Valley:		ornery element, and versatility (re-	
ground water in Cedar Rapids divi-		marks)-----	8096
sion of lower basin-----	19800	selected measurement methods in	
water supply outlook and snow sur-		nuclear fuel cycle-----	4303
veys of drainage basins-----	4138	change-----	19249
Plaudé, K.K., president of Academy of		Plutonium dioxide:	
Sciences, Latvian SSR, inter-		fabrication cost estimate for UO <sub>2</sub>	
view-----	16499	and mixed PuO <sub>2</sub> -UO <sub>2</sub> fuel-----	8053
Play it safe-----	16841	oxygen to metal ratio in solid solu-	
Playgrounds, American's, national		tions of uranium and plutonium	
forests, skiing-----	39	dioxides, measurement-----	8054
Pleasure of excellence (address)---	11872	Plutonium isotopes, Pu-239, systems	
Pleistocene period, <i>see</i> Glacial period.		containing, critical dimensions	17062
Plethysmograph, volume displacement		Plymouth, Conn., redevelopment area,	
body, measurement of airway		opportunities for economic de-	
resistance-----	17010	velopment-----	11821
Plethysmography, impedance plethys-		Plywood:	
mographic determination of		Federal item identification guides	
cardiac output-----	9988, 15238	for supplying cataloging-----	12292
Pliers, connect hose containing liquid		supplements-----	3473
under pressure-----	9551	hardwood, current industrial re-	
Pliocene period, treatment of smaller		ports-----	161, 11896
Foraminifera, southern Okla-		joints, nail-glued to solid wood,	
nawa-----	10845	performance-----	18056
Pitt, Alfred C., testimony, hearings.	8456	softwood, current industrial re-	
Plotters, polychart contour, enables		ports-----	15312
data extrapolation from multi-		PMS series, <i>see</i> Personnel methods	
ple plotting charts-----	16676	series.	
<i>see also</i> Plotting boards and plot-		PN series-----	3950
ing.		Pneumatic power is transmitted	
		through air bearing-----	16674
		Pneumatic systems, <i>see</i> Compressed	
		air.	
		Pneumautomation, <i>see</i> Automation.	

	Entry
Pneumoencephalography, interpretation of axial transverse encephalography, new concept	5553
Pneumographs, impedance, dynamic characteristics, thoracic cage impedance measurements	5907
Pneumonics, jet pneumoautomatics, USSR	20275
Pocket guides:	
France	20986
Great Britain	4278
Italy	8023
Poes, Keustantinas:	
Cricketsoude rocket system evaluation	19156
evaluation of varactor diode parametric amplifier for Rawin set AN/GMD-2	65
Podiatry, see Chiropody.	
Podonominiae, see Flies.	
Poetry:	
National Poetry Festival, Library of Congress, Oct. 22-24, 1962, proceedings	13093
Terkin versus Terkin, critique of A. Tvardovskiy's new poem, USSR	1089
Point Conception, Calif. to Mexican border coastal warning facilities chart, 1964	13524
Point Mugu, Calif., Naval Air Missile Test Center area, geology and ground-water appraisal	2427
Point Pleasant Canal:	
naming	21140
law	17754
reports	19469
Point Reyes National Seashore, general information	20664
Point-sampling factors for southwestern ponderosa pine	790
Po-I-Po distorts facts, USSR article	14518
Poiseuille equation, see Equations.	
Poisonous plants, Western States, description, etc.	20915
Poisons:	
dopane toxicity reduced with aminoethylisothiouonium (AETH) in experiments on monkeys USSR study	7344
economic, labeling and registration	
law	12000
report	4480
emergency treatment for poisoning, USSR studies	21452
enzymatic classification, USSR study	21453
high-toxic organic phosphoric-acid esters, analysis, Hungarian study	5257
increase in toxicity with decrease in concentration, USSR study	10740
National Clearinghouse for Poison Control Centers bulletins	3763
organophosphorus insecticides, toxicity, Rumanian study	10849
pachycarpine poisoning in clinical practice, USSR study	21551
poisonous bites, treatment and prevention, USSR study	20236
resistance of organisms to toxic substances, USSR study	7135
synthetic, chemistry, effects and military significance, East German study	8955
toxic factors in acid soils in south-eastern U.S. as related to lime response to alfalfa	5857
toxic substances from fluorine compounds, USSR study	927
toxicity of chemicals force-fed to carp	6729
see also Lead poisoning.	

	Entry
Poland:	
Academy of Sciences—	
new members, 1962	5047
organization of scientific information activity	16441
agricultural commodities, agreement	9818-19
bibliography of social science periodicals and monograph series, 1945-62	15324
chemical industry in OMEA	5195
climatological and hydrological research	2737
cooperation between Polish and Soviet scientific organizations	20244
current central industrial plan, tentative optimization	9112
Druzhba oil pipeline and prospects for development of chemistry—	5157
East European legal journals, abstracts	2512, 6979, 10947
five year plan	18254
higher education, admissions rules, student activities, and curricula	14187
industry, interbranch balance for 1961 in physical terms, study—	9153
labor force, characteristics and growth	6048
legal journals, abstracts	919, 16535
most-favored-nation treatment, U.S. interest in	13482
optimization of Polish industrial development plan	7303
patents, abstracts, translations	1801-2, 4338
Polish People's Army, code of ethics for officer	16544
provincial press, summaries	952
1021, 1103, 1186, 1334, 2538, 2588, 2734, 2864, 4932, 5041, 5138, 5182, 5263, 5380, 6915, 6974, 7040, 7123, 7174, 7225, 8855, 8976, 9088, 9228, 9332, 10783, 10890, 11013, 11106, 11176, 12000, 12712, 12842, 12925, 14428, 14542, 14606, 16049, 16133, 16230, 16296, 16387, 16516, 18248, 18348, 18462, 18562, 19871, 19984, 20139, 20225, 20403, 21433, 21534, 21639.	
role of technical sciences in development of national economy, translation	18443
scientific cooperation with USSR	6987
settlement of claims of U.S. nationals, agreement	8630
State Institute of Hydrology and Meteorology, organization and activities	922
telecommunication equipment, public, development to 1980	2681
topographical maps, hydrographic details shown	12790
Warsaw Radio and Television Design Office, activities	12960
Polar mesosphere, see Mesosphere.	
Polar regions, see Arctic regions.	
Polaris (missile), see Missiles.	
Polaris (star), see Pole star.	
Polarity (biology):	
effect of aerolons of different polarities, USSR studies	1031
Polarization (light):	
planets and some terrestrial substances, research study	16727
planets, by means of their light, study	16728
Polarography, determination of oxygen content and capacity in single blood sample	17014
Pole star, ephemeris, 1965	16616



# INDEX 1964

	Entry
Poles:	
building frames, wind stresses-----	18061
commercial production in northern Rocky Mountain area, 1962-----	8644
Police:	
Capitol—	
employ additional personnel, report-----	12069
longevity benefits, preserve, report-----	17508
civil rights enforcement (address)-----	15376
District of Columbia—	
Police Department, examination announcement, policeman-----	10101
residence restrictions, repeal-----	
law-----	17376
reports-----	13976, 17717
salaries, increase-----	
law-----	17433
report-----	15569, 17613, 17716
District of Columbia police, U.S. Park Police, and White House Police sick leave benefits-----	
law-----	17330
reports-----	6323, 15773
employment outlook-----	13055
Japanese scientific research on counterfeiting and forgery-----	9064
National Zoological Park, salaries, amend act, hearing-----	12282
police-minority group relations in Los Angeles and San Francisco Bay area, civil rights report-----	1839
policewomen, employment outlook-----	13055
retirement credit for service for members of Secret Service Division-----	
law-----	17335
reports-----	13974, 15783
Smithsonian Institution buildings and grounds, amend act-----	
hearing-----	12282
law-----	17250
reports-----	379, 15693
Texas, social security coverage-----	
law-----	13898
reports-----	8308, 12232
Policy research study (series)-----	9802-1, 11625, 16872
Poliomyelitis:	
anterior embacuta, histopathology, East German study-----	16066
radon hydrotherapy treatment, USSR studies-----	9300
Political activities, <i>see</i> Politics.	
Political campaigns, <i>see</i> Elections.	
Political conventions, delegates, selection, laws, etc., analysis-----	8404B
Political corruption:	
Federal corrupt practices act, as amended, revised text-----	10357
print as Senate document, report-----	8430
Political economy, <i>see</i> Economics.	
Political parties, Democratic and Republican Party platforms, 1964-----	19438
Political rights of women, <i>see</i> Women.	
Political scientists, employment outlook-----	9409
Politics:	
Communist China—	
politics-military relationships-----	9803
translations-----	899, 912, 981, 989, 1046, 1100, 1113, 1139, 1189, 1223, 1281, 1297, 1307, 1320, 1342, 2573, 2614, 2709, 2739, 2759, 2793, 2885, 2931, 4897, 4930, 4997, 5066, 5117, 5191, 5242, 5280, 5303, 5330, 6907, 6934, 6990, 7007, 7068, 7096, 7129, 7299, 7311, 9058, 9147, 9284, 9311, 10797, 10827, 10946, 11046, 11181, 12666, 12751, 12849, 12873, 12886, 12976, 14413, 14529,

	Entry
Politics—Continued	
Communist China—Continued	
translations—continued	
14557, 14655, 16001, 16065, 16125, 16138, 16166, 16193, 16224, 16258, 16292, 16305, 16325, 16469, 16475, 16495, 16508, 16517, 16554, 18203, 18225, 19300, 18365, 18394, 18446, 18529, 18593, 18603, 19848, 19886, 20046, 20137, 20160, 20187, 20314, 20399, 21527, 21549, 21609.	
Eastern Europe, translations-----	918
1351, 2702, 2905, 2932, 5311, 5365, 6993, 7103, 7211, 7238, 7272, 8966, 9136, 9247, 10821, 10858, 10943, 10981, 11037, 11049, 11155, 11187, 11209, 12604, 12633, 12656, 12806, 12821, 12921, 14414, 14506, 14546, 14586, 16009, 16127, 16242, 16351, 16404, 16537, 18207, 18414, 18449, 18556, 18595, 19863, 19930, 20030, 20191, 20197, 20274, 20318, 21513, 21523, 21575, 21629, 21650.	
economic-political ideas of European Social Democrats, 1964--	7250
means of turning ideals into action and action into programs for national cause (address)-----	13373
North Korea, translations-----	942
1141, 1301, 2471, 2547, 2645, 2671, 2680, 2695, 5054, 7145, 8946, 9049, 9150, 9227, 12975, 15997, 16455, 18401, 18598, 20261.	
North Vietnam, translations-----	1170
1201, 1293, 2537, 2628, 5211, 5253, 5273, 5287, 5341, 5412, 7034, 7110, 7315, 7349, 8889, 8977, 9317, 10820, 10955, 11058, 11153, 11164, 11170, 11191, 11197, 11239, 12596, 12684, 12747, 12850, 12949, 12995, 14492, 14536, 14558, 14578, 14587, 16117, 16187, 16197, 16159, 16165, 16174, 16197, 16226, 16263, 16285, 16303, 16349, 16457, 16479, 16566, 18262, 18274, 18390, 18404, 18473, 18513, 18590, 19843, 19861, 19935, 20000, 20006, 20102, 20339, 21429, 21468, 21583.	
political activity, Federal officers and employees-----	10108
legal restrictions-----	10103
rules-----	8381
Soviet bloc trends, hearings-----	10839
USSR, talks on political subjects-----	
<i>see also</i> International relations.	
Polkinghorn, F. A., Jr., application of Bose-Chaudhuri error-correcting codes-----	18858
Pollack, Irwin, intelligibility of excerpts from conversation-----	17003
Pollard, A. J.: proposed phase diagram for system-----	
magnesium oxide-vanadium pentoxide-----	18861
vanadium pentoxide-zinc oxide-----	5605
Pollination, <i>see</i> Fertilization of plants.	
Pollock, Eugene N., remarks, June 23, 1964-----	14679
Pollock, Josephine: cooperative extension service work with low income families-----	2314
aging people-----	2316
migrants-----	2315

Entry	Entry
Pollock, Samuel J., bedrock geology of Tiverton quadrangle, R.I.-Mass-----	15942
Pollucite, ores, cesium extraction, dissolution and roasting techniques-----	9505
Pollution-caused fish kills, 1963-----	13414
Pollution of air, see Air pollution.	
Pollution of streams, see Water pollution.	
Pollution of water, see Water pollution.	
Polonium, occupational hygiene in working with polonium, extracts from USSR booklet-----	7275
Polyamides, containing S-triazine rings, synthesis-----	13370
Polychart contour plotter enables data extrapolation from multiple plotting charts-----	16676
Polycrystalline, see names of elements or metals.	
Polycrystalline solids, see Solids.	
Polyethoxylated amines as flotation collectors for slimed lead minerals-----	9509
Polyethylene: film, standard of trade-----	16736
inspection of thick sections by radiography and fluoroscopy-----	13369
low-molecular weight, use as matrix material in obtaining ultraviolet spectra of insoluble materials-----	11342
measurements of effective heats of ablation at convective heating rates from 25 to 420 Btu/ft <sup>2</sup> sec, errata-----	14835
plastic pipe, standard of trade-----	5542
Polyethylene terephthalate, molecular weight determined from terminal radicals-----	5534
Polygraphs: use as lie detectors by Federal Government, hearings-----	14003, 15588
use by Federal Government—hearings-----	16315
preliminary study-----	8384
Polymers and polymerization: chemistry in Communist China-----	10909
friction, wear, and decomposition mechanism in vacuum-----	3027
high polymers, thermal degradation, oxidation, and analysis, literature survey-----	4608
hydrophobic and oleophobic fluoropolymer coatings of extremely low surface energy-----	13341
Japanese Association for Radiation Research on Polymers—report, 1958-59-----	11853
report 1960-----	13689
report 1961-----	13690
phosphorus containing polymers, USSR study-----	20242
prolongation of life of polymers, USSR study-----	20372
spiral-to-ball transitions in biopolymers, USSR biophysical study-----	10881
styrene acenaphthylene copolymers, viscoelastic properties in transition region-----	7655
wettability of solid polymers, effect of partially fluorinated additives-----	5601
wood-plastic combination preparation using gamma radiation to induce polymerization-----	8066
see also Polyethylene terephthalate.	
Polynomials: Legendre, magnetic field from finite thin cone-----	16708
Polynomials—Continued	
surface fitting using sample data from underground copper deposit-----	18704
Polyphenols, see Phenols.	
Polyphenyl, catalytic hydrocracking in reclamation of nuclear reactor coolant-----	8059
Polyps, female gonads of Coelenterate polypodium hydriforme, cytomorphological study, USSR-----	1153
Polyrangers, U-88 or UX, sensitive research model, instrument calibration procedure, technical manual-----	13359
Polyspermy-blocking mechanism in echinoderms, USSR-----	4978
Polystyrene: formed, wind-noise shield protector for low-frequency microphones-----	13199
shrink-film wrapping of lettuce, effects of heat-tunnel temperatures-----	36
Polytetrafluoroethylene, Teflon measurements of effective heats of ablation at convective heating rates from 25 to 420 Btu/ft <sup>2</sup> sec, errata-----	14835
Polyvinyl alcohol, see Vinyl alcohol.	
Polyvinyl chloride, see Pipe and pipe fittings.	
Polyvinyl pyrrolidone, use to prolong action of penicillin and streptomycin, USSR study-----	5068
Polyzoa, fossil bryozoa from drill holes on Eniwetok Atoll-----	15945
Pomegranates, production, use, value, by States, 1962-63-----	15129
Pomerene, Joel B., geology and ore deposits of Belo Horizonte, Ibiritê and Macacos quadrangles, Minas Gerais, Brazil-----	10638
Pomeroy, J. S., recognition criteria of rocks on aerial photographs of Chichagof and Krusof Islands-----	6795
Ponderosa pine, see Pine.	
Ponds, see Fish ponds.	
Pondweeds and pondweedlike plants of eastern North America-----	15917
Pontecorvo, Giulio, economic survey of U.S. fisheries in Passamaquoddy region, 1956-57-----	10575
Pontons: Federal item identification guides for supply cataloging-----	12297
supplements-----	3478
Poole, William R., season's first tobacco market reports-----	15191
Pooling: cotton allotments of Billie Sol Estes, Agriculture Dept. handling—hearings-----	532
report-----	19584
Pools: recreation, at Cochiti Reservoir, make water available—law-----	8232
report-----	6331
Poplar, hybrid, 2d year results of test plantings on bituminous strip mine spoils in Pennsylvania-----	14321
Popples, opium, control of production, regulations of Narcotics Bureau-----	21724
Poppleton, Howard O., process for preparation of thorium by sodium reduction of thorium tetrachloride-----	20508

# INDEX 1964

	Entry
Population :	
census, amend U.S. Code rel. to duties of enumerators—	
law .....	17389
report .....	17762
census, 1960—	
characteristics of population—	6035,
summary .....	8105
coverage, record check studies—	10067
evaluation and research program of U.S.—	185, 10067, 15322-323
background, procedures, and forms .....	185
final reports .....	192-193,
1826, 8140, 10074, 11913-915,	
13773-774, 15326, 17114, 19308	
announcements .....	15300
subject reports, announcement and order form .....	15301
graphic pamphlet series .....	187, 17115
occupational characteristics .....	193
1/1,000 and 1/10,000 samples, description and technical documentation .....	11916, 21037
our growing population .....	17115
population characteristics, accuracy of data as measured by re-interviews .....	15323
processing the data, Puerto Rico .....	1808
supplementary reports .....	6033-34, 8106-7
type of place, demographic, social, and economic data for States, by urban-rural and metropolitan-nonmetropolitan residence .....	17114
United States, growth of metropolitan areas, 1960-63 .....	17104
veterans, selected social and economic data for former members of Armed Forces .....	13774
women by number of children ever born, fertility by social, economic and housing characteristics .....	11914
census publications, price list .....	13389
current population reports—	
consumer buying indicators series .....	183, 8132, 11907, 17108
consumer income, series .....	11906, 19305
population characteristics, series .....	4349,
8122, 13762, 15314, 17104,	
19298,	
population estimates, series .....	169,
1822, 8123-28, 10064, 11905,	
13763-764, 15317, 17105, 19299-302, 21035,	
socioeconomic characteristics, 1960 .....	15315
special censuses series .....	170-182,
4350-52, 8129-31, 10065-66,	
13765-766, 15318-321, 17106-107, 19303-304,	
States, District of Columbia and Puerto Rico estimates, July 1, 1963, with preliminary estimates for July 1, 1964 .....	17105
technical studies .....	1820-21,
10063, 15315-316	
current population survey, household statistics on employment and unemployment, concepts and methods used .....	16589
distribution, urban and rural, U.S., 1960, map .....	4356
farm—	
estimates, Apr. 1963 .....	10062
series census-ERS .....	10062
farms, estimates, 1963 .....	17904
forecasting methods .....	20776
geographic mobility—	
Negro-white differences .....	17024
propensity to move .....	17025

	Entry
Population—Continued	
impact on our national society (address) .....	227
Indian, U.S., 1962 .....	838
international reports .....	10068-70
international statistics report .....	6048
mobility, Apr. 1961-Apr. 1962 .....	4349
1960 censuses, procedural report .....	1827
nonwhite, housing, changes between 1950 and 1960 .....	832
problems, study .....	2115, 6366
print additional copies, report .....	19479
South Korean administrative areas, statistics .....	20098
special censuses conducted by Bureau of Census—	
Jan. 1-Dec. 31, 1963, summary .....	8130
July 1 and Sept. 10, 1963 .....	179
Oct. 1-Dec. 31, 1963, summary .....	8129
Jan. 1-Mar. 31, 1964, summary .....	10066
States—	
and Puerto Rico, estimates by age .....	8125
estimates .....	21035
structure change through selection in case of overdomination, USSR study .....	12811
trends .....	2436
United States—	
characteristics, census, 1960, summary .....	8105
estimates - 169, 1822, 10064, 19299-302	
and components of change, 1940-64 .....	8123
Jan. 1, 1950-Feb. 1, 1964 .....	8126
Jan. 1, 1950-Mar. 1, 1964 .....	8128
Jan. 1, 1950-May 1, 1964 .....	11905
Jan. 1, 1950-June 1, 1964 .....	13764
Jan. 1, 1950-July 1, 1964 .....	15317
projections by age and sex, 1964-85 .....	13763
projections by age and sex to 1985 .....	8124
selected standard metropolitan statistical areas, July 1, 1962 .....	8127
Pork, loins and chops, frozen, evaluation .....	5715
Poro Point, hydrogeologic reconnaissance .....	15955
Poroshkovaya metallurgiya (periodical) : .....	
translations .....	4969
Port Arthur, Tex., occupational wage survey .....	18630
Port Elizabeth, N.J. : .....	
navigation channels, maintenance, engineer report—	
departmental edition .....	8518
document edition .....	8260
Port Isabel, Tex. : .....	
dust control measurements at Long Island, study, authorize—	
hearings .....	17663
law .....	13876
reports .....	10223, 12214
Port Orford, Oreg. : .....	
harbor, engineer report—	
departmental edition .....	10492
document edition .....	10352
Portable aircraft condition evaluator recorder, Project PACER, technical report .....	5724
Portable display paneling has wide use, easy take down and assembly .....	9558
Portable flooring protects finished surfaces, is easily moved .....	9556
Porter, B. A., eastern tent caterpillar .....	19082
Porter, Horace G. : .....	
cotton in Brazil .....	10583
prospects for cotton textile industry and cotton consumption in EEC .....	21823

# JANUARY-DECEMBER

	Entry
Porterfield, G., sedimentation of Lake Pillsbury, Lake County, Calif.	6815
Portland, Maine, occupational wage survey	7411
Portland, Oreg.:	
occupational wage survey	16600
port	624
principal electric facilities, map	676
Portland Area Conference on Industrial Modernization, proceedings, Mar. 26, 1964	13743
Portland cement, see Cement.	
Portman, Donald J., visual resolution and optical scintillation over snow, ice, and frozen ground	12344
Ports:	
distances between ports, 1964	9675
foreign, code classification, schedule K	6049
port series	622-624, 10493, 15875-876
see also Military ports—also names of ports, or places where located.	
Portsmouth, Va.:	
naval hospital lands, legislative jurisdiction—	
hearing	10296
law	17244
reports	10270, 14116
occupational wage survey	18635
Portugal:	
agricultural commodities, agreement	11639
education, exchange program, financing, agreement	9838
educational data	19627
military assistance program, aircraft spare parts, cancelling excessive procurements, etc., GAO review	18088
opposition and succession to Salazar (articles)	10991
Portuguese East Africa, economy, basic data	10695
Portuguese language, translations of U.S. books, bibliography	1391
Position-classification standards	3553
Post, E. J., radiation forces in inhomogeneous media	13641
Post exchanges, see Commissaries.	
Post Office and Civil Service Committee, House:	
calendar	3655
committee prints	2119-20, 10337, 10339, 10341, 12152, 15600, 17662
hearings	406-409, 2117-18, 8391-94, 10334-336, 10338, 10340, 10342, 12150-151, 14013-14, 15599, 15601, 17661, 19520
investigations and studies, expenses, report	6310
reports	331, 338, 340, 352, 2057, 6276, 6286, 8336-37, 10215, 10232, 10259, 10261, 10265, 12078-81, 13938, 19463
Post Office and Civil Service Committee, Senate:	
additional clerical assistant, reports	4546, 6457
calendar	3673
committee print	17888
hearings	544-545, 4591-92, 6520-24, 8454-55, 12279, 17887
investigations and studies:	
expenses, report	6456
postal service and civil service, expenses, report	4545
reports	469, 2193-94, 2225, 4545-46, 6480, 6485, 14071, 15768, 17790-795

	Entry
Post Office Department:	
agreement with American Federation of Labor and Congress of Industrial Organizations	15026
agreements with employee organizations, 1963 and 1964	15026
annual report, 1963—	
departmental edition	7676
document edition	6217
appropriations, 1965—	
hearings	6340, 12251
law	17251
reports	8297, 14048, 15497
Assistant Postmaster General—	
Bureau of Facilities, nomination of Tyler Abell, hearing	4592
Bureau of Operations, nomination of William M. McMillan, hearing	6524
cost ascertainment report, 1963	11537
Deputy Postmaster General, nomination of Frederick C. Belen, hearing	6524
employees, relief	6434, 8208
equal employment opportunity program, summation (address)	15028
facilities handbook series	20728-729, 21834
general releases	3915
headquarters payroll activities, weaknesses, GAO review	6792
labor-management relations program (address)	16808
leases of real property, extend authority—	
law	17339
reports	10215, 12212
leasing property by Postmaster General on 30 year leases, hearing	8303
nonpersonnel offices, vehicle maintenance, facilities handbook	20729
payrolls, weaknesses in regional activities, GAO report	10613
philatelic releases	3915
policies and programs, implementation by supervisors (address)	16811
postal manual, issues—	
chap. 1 & 2, etc.	3856-57
chap. 3 & 7	3858
posters, commemorative stamps	1539, 3335, 9697, 11535-536, 13375, 16814, 18880, 20724-726, 21831-833
postmasters and rural letter carriers, procedures for appointment	10339
procurement practices for counterline-screenline equipment, GAO report	8725
public information service PI series	16816, 20730-731
report on postal rates structure	10189
service within framework of sound management techniques and prudent fiscal policies (address)	18879, 20722
uneconomical scheduling of city delivery carriers, GAO report	6784
unnecessary costs incurred in transporting 1st class mail by air, GAO report	12497
Post offices:	
directory, 1964, with ZIP code numbers	20727
leases, extend authority—	
law	17339
reports	10215, 12212
manual, issues—	
chap. 1 & 2, etc.	3856-57
chap. 3 & 7	3858
occupations, employment outlook	9449



# INDEX 1964

	Entry
Post offices—Continued	
Omaha, Nebr., dedication (address).....	20720
personnel handbook.....	3854
Philadelphia, Pa., discrimination in promotions, hearing.....	2117
receipts and classes.....	1541
stations, substations, or branches, increase area for establishing.....	
hearing.....	544
law.....	1948
report.....	2194
Postage:	
domestic rates, fees, and information (poster).....	9698
rate structure, Post Office Dept. report.....	10189
2d and 3d class postal rates for volunteer fire companies, extend, report.....	15768
Postage stamps:	
commemorative—	
Doctors Mayo, dedication (address).....	18876
Doctors Mayo, 5-cent postage stamp (poster).....	21832
5-cent American music (poster).....	20724
5-cent Battle of Wilderness (poster).....	9697
5-cent Christmas (poster).....	21831
5-cent homemakers (poster).....	20725
5-cent John F. Kennedy memorial (poster).....	11535
5-cent New Jersey tercentenary (poster).....	11536
5-cent Sam Houston (poster).....	1539
5-cent Verrazano-Narrows Bridge (poster).....	21833
Goddard, Robert H., 8-cent air mail (address).....	20723
Goddard, Robert H., 8-cent air mail (poster).....	20726
issuance, standards governing.....	16816
John F. Kennedy, dedication (address).....	13374
Nevada statehood 5-cent postage stamp (poster).....	13375
posters.....	3338
register and vote—	
dedication (address).....	16810
5-cent postage stamp (poster).....	16814
Sokol, unveiling ceremony (remarks).....	21835
philatelic releases.....	3915
stamp program, 1965 (address).....	18878
United States, July 1, 1847-Dec. 31, 1963, description.....	15027
Postal bulletin, see Postal service.	
Postal cards, commemorative, 4-cent social security (poster).....	18880
Postal carriers, see Mail carriers.	
Postal clerks, 1 & C, Navy training course.....	21822
Postal employees, see Postal service.	
Postal rates, see Postage.	
Postal Savings System, report of operations, 1963.....	4438
Postal service:	
accelerated business collection and delivery, ABCD mail service (address).....	9694
code of Federal regulations.....	6679
curtailment, hearings.....	14013
dog repellent, use by employees, questions and answers.....	20730
economics (address).....	15021
economy program (address).....	9695
employees—	
equal opportunity for all (address).....	16812

	Entry
Postal service—Continued	
employees—continued	
review of acceptable level of competence and quality, increase features of Federal salary reform act of 1962.....	10341
employees, salaries, adjust—	
hearings.....	12279
law.....	17285
reports.....	340, 6320, 10259, 12058, 14071, 15522, 15537
statement of purpose, analysis, etc.....	2120
goals and achievements (address).....	15020
House post office, additional clerks, report.....	17588
how postal inspection service protects you against mail fraud.....	20731
improvement of parcel post service through ZIP Code and other new methods (address).....	16807
investigation, expenses, report.....	4545
laws, changes.....	1540, 16815
mail transportation contracts, modernize laws—	
hearing.....	545
law.....	1968
report.....	2193
postal bulletin.....	3855
publications, price list.....	18886
special services performance, cost ascertainment report, 1963.....	11537
steps to improve mail service and to increase its capacity (address).....	18877
supervisors, responsibilities in implementing policy (address).....	16811
USSR, mail line communications.....	8916
work measurement system, hearings.....	409
ZIP Code information, publications for sale by Superintendent of Documents, price list.....	18890
see also International postal service—Mail carriers—Mail matter—Post offices.	
Posters:	
domestic postage rates, fees, etc.....	9698
fallout shelter signs, posting instructions, handbook.....	8151, 13793
inaugural address of John F. Kennedy.....	13920
Post Office Department, commemorative stamps.....	3338, 9697, 11535-536, 13375, 16814, 18880, 20724-726, 21831-833.
smallpox vaccination, international certificate, requirement.....	5665
sold by Superintendent of Documents, price list.....	20738
Postmaster General, see Post Office Department.	
Postmasters:	
acting and permanent, procedures for appointment.....	10339
examination announcements.....	13797, 15352-353, 21054
4th class, examinations, instructions to applicants.....	11947
Posts:	
12-year service tests on treated posts.....	18998
wood preservatives in Mississippi, 1964 progress report.....	12441
Posture, good posture for boys and girls.....	4621
Potash:	
compressive strength versus length-diameter ratios.....	5486
minerals yearbook chapter.....	18678
Potassium:	
content in Finnish Lapps and their diet.....	13392
high temperature properties.....	5614

# JANUARY-DECEMBER

	Entry
Potatoes:	
acres, yield, etc., by States and seasonal groups, 1962-63	16884
applying fertilizers, USSR study	9222
certified seed report, 1963	3164
commercial production	16946
fertilizers, USSR study	16524
futures:	
commitments of traders	3343
trading and open contracts	3547-48
Industry, Aroostook County, Maine, economic review	9993
insects, their biology and biological and cultural control	11752
Irish:	
futures trading on commodity exchanges, prohibit, report	8411
marketing quotas through acreage allotments, report	8412
utilization, 1963 crops	18988
Irish cobbler and Kennebec, effect of maturity on chipping quality	5836
Maine, futures	10134
Red River Valley, vine killing in relation to maturity	15223
spring, acreage marketing guides, summer and fall, acreage marketing guides	5786
total stocks, monthly report	4087
utilization conference proceedings	7940
warehousemen, lighter door to ease strain	7886
winter, acreage marketing guides	15181
yield, effect of growth substance of petroleum origin, development, and physiological changes, USSR study	8851
see also Sweetpotatoes.	
Potawatomi Indians:	
Citizen Band, convey land to—law	17280
reports	12107, 15715
Potential role of sterility method for insect population control with special reference to combining this method with conventional methods	20897
Potentiometers:	
rotating and static precision components symposium, proceedings	15009
unsaturated standard cells, cross-check, procedure, technical manual	13355
Potholes Reservoir:	
costs for recreational purposes to be nonreimbursable—	
hearing	10424
report	6488
Potocko, Richard J., bibliography related to human factors system program	18729
Potomac Institute, Inc., defense contractor, personal services with Defense Department with reference to cost reimbursement contracts, report	8336
Potomac River:	
tidewater portion, hurricane survey, engineer report—	
departmental edition	17957
document edition	17469
Washington Channel, designating Francis Case Memorial Bridge, report	15782
Potted plants, see Plants.	
Potts, James K., B-58A minimum control speed test	5879
Poultry:	
and products inspection programs, list of authorized chemical compounds	7878, 19045
automatic feeding equipment	7918

	Entry
Poultry—Continued	
business, Federal wage-hour law application	7838
exports to Common Market countries, impact of regulations, statements	6506
farm management	4202
feed production, current industrial report	13757
foreign agriculture circulars	3520
hatchery production	3567
inspection, applicants information	16931
inventory, 1964	7804
manure and other waste, disposal	16932
market statistics, 1963	7948
meat, keep drug residues out by poultrymen following pre-slaughter rules	6737
multiple-occupancy warehouses for poultry and egg wholesalers, improved designs	7929
national improvement plan—breed distribution of participating flocks	16
hatcheries and dealers participating in	7893, 19052
hatchery and flock participation, tables	1682
proposed changes	9926
plants operating under inspection and grading programs, list	4177, 13557
poultry and egg situation	3859
processing, dual track conveyor system	9948
products, foreign trade prospects	8628
publications, price list	9709
raising, scientific research, Rumania	14556
retail sales of broilers and meat as affected by price, display area, and newspaper advertising	14171
slaughtered under Federal inspection, monthly report	3860
USDA grades, how to buy	81
used in canning and processed foods, monthly report	3860
see also Chickens—Food for poultry.	
Poultry manure, see Fertilizers.	
Poultry mites, see Chicken mites.	
Poultrymen, poultry and egg producers, when you use medicated feeds follow preslaughter withdrawal rules, keep drug residues out of poultry meat and eggs	6737
Poverty:	
anti-poverty campaign (address)	6117
collective bargaining and war against (address)	7591
community's stake in eliminating poverty (address)	11712
cooperatives to lead unconditional war on poverty in rural America (remarks)	7917
economic opportunity act of 1964—agricultural aspects, hearing	12116
compilation of materials relevant to bill	15610
print as Senate document, report	15684
hearings	10306, 12126, 14152
law	17311
programs, appropriations, 1965 proposal	17464
reports	14120, 15482, 15523
eliminate poverty through education (remarks)	14665
facts (address)	14708
ideals are like stars (address)	20426
in United States	8788
President's antipoverty campaign, goals (address)	11965
President's program to remove causes (address)	7675

# INDEX 1964

	Entry
<b>Poverty—Continued</b>	
programs to combat—	
compilation of materials relevant to bill	15610
print as Senate document, report	15684
hearings	10306, 12126, 14152
law	17311
message from the President	8246
report	14120, 15482, 15523
public welfare's role in war on poverty	19028
rural—	
attacking (address)	5820
volunteers	14684
struggle against, India, China, and southeast Asia, observations—	2730
target for education (address)	6574
taxes, poverty, jobs, and profits (speech)	11829
war against, American Indian (address)	10670
war on poverty to extend hand and heart of this country (remarks)	12565
women in poverty, general information	16927, 21029
women's role in war on poverty (address)	12533
Poverty and Administration of Federal Criminal Justice, Attorney General's Committee on, <i>see</i> Attorney General's Committee on Poverty and Administration of Federal Criminal Justice.	
Powder metallurgy, <i>see</i> Metallurgy— also names of metals, etc.	
Powder metallurgy (USSR periodical):	
translations	4969
Powder River and Valley:	
geology and uranium deposits—	
basin	10629
Pumpkin Buttes area of basin	15941
Powders:	
copper, preparation from leach solutions after precipitation with iron	16637
sintered aluminum, heat resistant material, SAP, weldability by fusion, USSR study	20322
Powell, Barbara A.:	
accuracy of data on—	
housing characteristics	15322
population characteristics as measured by reinterviews	15323
Powell, James A., relief	1905, 2170
Powell, Jules V.:	
domestic tree nut industries, economic appraisal	21259
pecan nursery industry, structure and economic aspects	565
Powell, Ralph L., politico-military relationships in Communist China	9803
Power, E. A.:	
advance report on fisheries of U.S., 1963	6700
fisheries of United States, 1963	10552
fishery statistics of U.S., 1962	19740
Power, W. H., thermodynamic properties of saline water	19814
Power:	
Communist China, translations	910, 1102, 1213, 1339, 2603, 2611, 2723, 2787, 2929, 4933, 4958, 4988, 5077, 5235, 5265, 6918, 6933, 7031, 7104, 7154, 7281, 8936, 8970, 10796, 12642, 12830, 14412, 14537, 14643.
conservation, code of Federal regulations	8567
dissipation in diode swept along its reverse characteristic	11441

	Entry
<b>Power—Continued</b>	
Federal power act, amend—	
hearings	15804
report	17712
invisible waves, USSR study	980
machinery, USSR industrial development, translations	1085, 2583, 5089, 7091, 18555, 21437
motive, for class 1 railroads	3757
pneumatic, transmitter through air bearing	16674
statistics of class 1 railroads	3544
<i>see also</i> Atomic energy—Electricity—Horsepower.	
Power meters, <i>see</i> Electric meters.	
Power plants, maintenance, repair, and alteration, civil aeronautics manual	3324
<i>see also</i> Nuclear reactor power plants.	
Power reactors, <i>see</i> Reactors (atomic).	
Power series expansions, <i>see</i> Integration (mathematics).	
Power supplies:	
fundamentals of electronics	20686
horsepower of power equipment in manufacturing industries, census of manufactures, 1963	11891
John Fluke 406, instrument calibration procedure, technical manual	11507
Power transmission:	
equipment, mechanical, Federal item identification guides for supply cataloging	12289
supplements	3470
helicopter, investigation of conformational gear	20856
Power units, <i>see</i> Electric generators.	
Power Use Conference, Portland, Oreg.:	
proceedings—	
Feb. 27-28, 1963, supplement	13739
Feb. 19-20, 1964	13738
Powers, Bruce G., demonstrating minimum flying speed of delta-wing airplane	14870
Powers, Edward L., thermal radiation in elliptical earth orbit	9579
Prabhakara, Cuddapah, non-photochemical processes effects on ozone in atmosphere	14844
Practical nursing, <i>see</i> Nurses and nursing.	
Prado Dam quadrangle, Calif., stratigraphy, structure and oil resources, study	10641
Pragmatic analysis as theory of epistemological discipline, East Germany	10836
Prairie Bluff formation, <i>see</i> Cretaceous period.	
Pratt, Edmund T., jr., nomination, hearings	521
Pravda (periodical):	
editorials, translations	886, 921, 946, 964, 972, 1004, 1028, 1077, 1112, 1155, 1200, 1214, 1265, 1278, 1318, 1341, 1352, 2502, 2528, 2530, 2563, 2586, 2608, 2807, 2824, 2845, 2869, 2910, 4981, 5012, 5065, 5082, 5131, 5171, 5177, 5209, 5282, 5297, 5322, 5400, 6890, 6929, 6951, 6977, 6986, 7024, 7125, 7177, 7193, 7215, 7249, 7268, 7297, 7317, 8861, 8882, 8910, 8930, 8959, 8991, 9005, 9037, 9072, 9094, 9116, 9141, 9192, 9250, 9260, 9282, 9331, 10720, 10750, 10793, 10899, 10941, 10950, 11023, 11030, 11073, 11080, 11100, 11123, 11137, 11193, 11219, 12632, 12647.

# JANUARY-DECEMBER

	Entry		Entry
<b>Pravda (periodical)—Continued.</b>		<b>Predators of sea, and their commercial catches, USSR study of sharks</b>	10918
editorials, translations—continued		<b>Predicting outlooks of spoil banks</b>	772
12668, 12738, 12796, 12836,		<b>Prediction (psychology):</b>	
12848, 12878, 12905, 12934,		air traffic control specialists performance, comparison of experience with aptitude tests	13733
12952, 12963, 12987, 13014,		airman performance by career field, from selection and basic training variables	11802
14454, 14483, 14541, 14607,		airman qualifying examination use to predict completion of basic training	13635
14640, 16023, 16060, 16096,		carefulness test battery, validation against training school criteria	13633
16146, 16171, 16209, 16212,		relation of job qualification ratings to performance ratings of basic training instructors	20971
16231, 16244, 16262, 16301,		retirement rates officers, Markov chain theory, application	15235
16322, 16338, 16384, 16399,		technical training success, years of education as predictor	9983
16420, 16448, 16504, 16532,		<b>Pre-Fab Transit Co., accident</b>	10714
18220, 18241, 18256, 18271,		<b>Prefabricated buildings, see Buildings.</b>	
18326, 18347, 18418, 18453,		<b>Prefabricated houses, see Houses.</b>	
18467, 18508, 18530, 18543,		<b>Pregnancy:</b>	
18545, 18579, 19854, 19898,		ionizing radiation exposure, consequences, USSR study	2768
19916, 19953, 19969, 20075,		progress in collaborative perinatal research, nationwide mother-child study, summary	16752
20093, 20151, 20171, 20183,		<b>Premarital examinations, District of Columbia, require, report</b>	17617
20249, 20277, 20295, 20354,		<b>Premiums (Insurance), see Life Insurance.</b>	
20385, 20415, 21404, 21483,		<b>Preneed burial service, hearing</b>	19587
21516, 21543, 21559, 21621,		<b>Prepackaging, see Packaging.</b>	
21632, 21647.		<b>Preparation and evaluation of divorces</b>	11318
<b>Prayers:</b>		<b>Preparedness, see National defense.</b>	
offered by Senate Chaplain, 87th and 88th Congresses, print as Senate document, report	19575	<b>Prescott, Glenn C., Jr., reconnaissance of ground-water conditions in Maine</b>	825
proposed constitutional amendments, hearings	17658	<b>Preselect address unit for IBM 1620 computer</b>	11859
print additional copies, reports	17561	<b>Presentations, analysis, key to effective briefings</b>	5626
school—		<b>Preservation of food, see Food.</b>	
proposed constitutional amendments, staff study	10328	<b>Preservatives, millwork, water-repellant non-pressure treatment, standard of trade</b>	18802
Supreme Court opinions print additional copies, reports	4456, 4534	<b>see also Wood preservatives.</b>	
<b>Pre-Cambrian period:</b>		<b>President of United States:</b>	
lake deposits in Western States, review and annotated bibliography	15940	addresses, etc.—	
metamorphic and igneous rocks in Front Range, description	12507	Apr. 21, 1964	12565
pegmatites and other rocks in southern Black Hills (series)	4783	May 11, 1964	12562
quartzite-schist sequence along Coal Creek, relationship to Idaho Springs Formation, Front Range, Colo.	18135	America as great power (address)	11620
Precious stones, gem stones, minerals yearbook chapter	20474	Assassination of President John F. Kennedy, President's Commission on, report	18882
<b>Precipitation:</b>		campaign, 1964, suspend equal time provisions of communications act, report	12050
climatic data, calibrating watershed runoff	8679	career staff to the President	4322
cloud, USSR study	7183	code of Federal regulations	6644,
decennial census of U.S. climate	15154-		10536, 21310
155, 19016-25, 20877-878, 21919-920,		<b>economic report—</b>	
effect on bromegrass-crested wheat-grass hay production	5858	departmental edition	5635
frequency distributions, techniques for fitting to hydrologic data	9931	document edition	4442
hourly data, by States, etc.	3578	hearings	6192
normal annual total precipitation, inches, national atlas sheet	1657	report	6481
Pacific Northwest, monthly storage-gage, data for Western United States, July 1962-June 1963	3829	equal employment opportunity (remarks)	9702
Tennessee River basin	15163	inability and succession to office, proposed amendments to Constitution	
two- to ten-day, for return periods of 2 to 100 years in contiguous United States	3862	hearings	14148
<b>see also Rain—Weather control.</b>		report	17727
<b>Precipitators, copper dust, laboratory smelting</b>	5483		
<b>see also Electrostatic precipitators.</b>			
<b>Precision casting, see Founding.</b>			
<b>Precision gage measures ultrahigh vacuum levels</b>	13200		
<b>Precision instruments:</b>			
casing alloys for high-precision parts, USSR investigation	16069		
USSR industrial development, translations	2503,		
2694, 2740, 5164, 5183, 6962,			
7077, 10726, 18350, 18491			



# INDEX 1964

	Entry		Entry
President of United States—Continued		President's Commission on Status of	
inaugural address of John F. Kennedy—		Women:	
poster	13920	publications	18889
print as House document in form	4475	report of Committee on Civil and	
suitable for framing, reports	8421	Political Rights	13381
inaugural committee, 1961, record,		report of Committee on Educa-	
preliminary inventory	20635	tion	7679
Kennedy 3-year record, summary	4516	report of Home and Community	
message of President Johnson to		Committee	5638
joint session, Nov. 27, 1963	283	report of Private Employment Com-	
messages, <i>see</i> , below, veto mes-		mittee	5639
sages— <i>also</i> in main alphabet,		report of Social Insurance and	
subject of message.		Taxes Committee	1545
nomination and election including		report on 4 consultations, private	
manner of selecting delegates		employment, etc.	1542
to national political conven-		President's Committee on Employment	
tions, laws, etc. analysis	8404B	of the Handicapped:	
papers—		ability counts contest for 11th and	
announcement and order form	15037	12th grade students, announce-	
Harrison, Benjamin	13095	ment	11251
index series	1392, 13095	annual meeting, 1963, report	5423
Kennedy, John F.	10540	appropriations, increase authoriza-	
Truman, Harry S.	14254	tion—	
Senate, relating to presidential		law	13871
nominations, 1789-1901	21781	reports	471, 12093
Washington, George	18652	general information	18620
papers of Presidents in L.C., micro-		minutes of meeting, 1964	18617
filming, remove authorization		performance, story of the handi-	
limitation—		capped	3845
law	10142	press releases	3917
reports	2036, 10394	publicity handbook, program guide,	
peace proposals to 18-nation Com-		1964-65	18618
mittee on Disarmament at Gene-		speakers handbook	7371
va, Switzerland, elabora-		President's Committee on Equal Em-	
tion	15261	ployment Opportunity:	
President Kennedy's visit to USS		committee reporter (periodical)	7677
Observation Island to observe		how to file a complaint	9700
Polaris firing, Nov. 16, 1963,		information newsletters	3596
photographic record	5621	report	13382
presidential transition act of		President's Committee on Juvenile De-	
1963—		linquency and Youth Crime:	
law	8216	counter-attack on delinquency	16819
reports	4526, 6292	implications for education (speech)	5762
Presidents of U.S., list of refer-		President's Committee on Public	
ences 1789-1962	5457	Higher Education in District of	
press releases	3916	Columbia, report	16821
state of the Union address	1996	President's Committee on Status of	
Thanksgiving Day proclamation of		Women, report of Federal Em-	
John F. Kennedy	6196	ployment Policies and Prac-	
print as House document, report	4474	tices Committee	3090
3d anniversary of Alliance for Prog-		President's Committee on Youth Em-	
ress (address)	9798	ployment, press releases	3918
tribute to Armed Forces (address)	17032	President's Conference on Occupa-	
veto messages—		tional Safety, news	13081,
Bernardo, Anthony F.	17462	13034-36, 13041, 14676-682	
Catalina Properties, Inc.	17463	President's Council on Aging, employ-	
Cerrito, Ambrose A.	17462	ment opportunities, etc., for	
Finney, R. Gordon, jr.	8258	the aging, report	5640
Maddux, James T.	421	President's Council on Pennsylvania	
Wetzel-Oviatt Lumber Co., Inc.	19448	Avenue, report	13378
<i>see also</i> Kennedy, John F.		President's Council on Physical Fit-	
President's Advisory Commission on		ness, report	16822
Narcotic and Drug Abuse:		President's Panel on Mental Retarda-	
interim report	3087	tion:	
report	5636	recommendations, etc., HEW's re-	
President's Advisory Committee on		sponse	8790
Labor-Management Policy:		report of mission to USSR	9703
Appropriations, 1965—		report of task force on coordina-	
hearings	6341, 12251	tion	3088
law	17251	reports, task force on behavioral	
reports	8297, 14048	and social research	15029
President's Appalachian Regional		President's reorganization plans <i>see</i>	
Commission, report	9699	Government reorganization	
President's Commission on Assassina-		plans	
tion of President John F. Ken-		President's Task Force on Manpower	
nedy, report	18882	Conservation, report	7678
President's Commission on Registra-		Press:	
tion and Voting Participation,		Albania, information reports	1005,
report	3091	1154, 2617, 4946, 5288, 7014,	
		7098, 7263, 8872, 8989, 9091,	
		9256, 10851, 10953, 11083, 11189,	
		12582, 12696, 12737, 12813,	
		12832, 14429, 14453, 16006,	
		16073, 16178, 16191, 16297,	
		16362, 16406, 18244, 18277,	

# JANUARY-DECEMBER

	Entry		Entry
Press—Continued		Press operators, offset duplicating,	
Albania, information reports—Con.		examination announcement,	
18412, 18477, 18574, 20037,		amendment	17131
20040, 20066, 20182, 20382,		Press releases, see names of offices	
21645, 21645.		issuing releases.	
Bulgarian provincial, summaries—	889,	Pressmen:	
1165, 2658, 4915, 5150, 5325,		cylinder, and lithographic offset, ex-	
6914, 7321, 8856, 9179, 10986,		amination announcement,	
11033, 11206, 12628, 12723,		amendment	17131
12884, 12991, 14461, 14571,		examination announcement—	4398
19832, 19912, 19933, 19944,		Pressure:	
20208, 20258, 20264.		base, coefficients obtained from	
Czechoslovak provincial, sum-		X-15 airplane for Mach num-	
maries	905,	bers up to 6—	18752
998, 1042, 1098, 1126, 1260, 2514,		calibration of pressure trans-	
2640, 2777, 2867, 4890, 5072,		ducers	3046
5121, 5194, 6916, 7018, 7132,		chambers, bio-instrumentation con-	
7199, 7328, 8858, 9051, 9135,		trol—	21825
9202, 9286, 10774, 10840, 10948,		condensing pressure drop by im-	
11066, 11188, 12619, 12746,		proved Lockhart-Martinelli	
12846, 13003, 14448, 14601,		method	21729
14649, 16072, 16181, 16257,		delta wing measurements at Mach	
16341, 18425, 18470, 19884,		numbers and angles of attack—	18740
19986, 20044, 20356, 21380,		differential—	
21432, 21617.		effects on flutter of flat panels—	3022
Hungarian provincial, summaries—	950,	system for evaluating angles of	
973, 1206, 2480, 2567, 2686,		attack and sideslip of Ranger	
2881, 4941, 5145, 5161, 6887,		IV vehicle	1457
6960, 7176, 7260, 8935, 9024,		distribution—	
9055, 9158, 9203, 9226, 10736,		and axial temperature in EGCR	
10829, 10957, 11040, 11177,		development of PTD-1 pro-	
12641, 12809, 12872, 12896,		gram	11857
12959, 14500, 14633, 16050,		cylindrical bodies with different	
16068, 16260, 16405, 16445,		nose shapes and nose drag co-	
16452, 18282, 18381, 18472,		efficients on helium, Reynolds	
18536, 19883, 19894, 20018,		number effects—	1486
20157, 20346, 20352, 21608,		delta wing in hypersonic flow—	11418
Indonesian surveys—	983,	delta-wing windward pressure,	
1180, 2470, 2761, 4937, 5130,		control-surface interaction ef-	
5377, 7085, 7261, 8995, 9233,		fects	14867
10870, 11067, 12594, 12866,		missile base and afterbody, jet	
14499, 14658.		effects at supersonic speeds—	1467
Latin American glossary of abbre-		fields in mid-level of atmosphere	
viations used	18542	for entire sphere of earth, hy-	
Polish provincial, summaries—	952,	drodynamic forecasting con-	
1021, 1103, 1186, 1334, 2538,		sidering orography, USSR	
2588, 2734, 2864, 4932, 5041,		study	6884
5138, 5182, 5263, 5386, 6915,		fin-plate interference model at Mach	
6974, 7040, 7123, 7174, 7225,		number of 6—	16679
8855, 8978, 9088, 9228, 9332,		high—	
10783, 10890, 11013, 11106,		feasibility of electrical precipita-	
11176, 12600, 12712, 12842,		tion	2993
12925, 14428, 14542, 14696,		olivine shear strength—	19155
16049, 16133, 16230, 16296,		Induced, on blunt cones in hyper-	
16387, 16516, 18248, 18348,		sonic flow—	9584
18462, 18562, 19871, 19984,		jets, high-intensity pulse, measur-	
20139, 20225, 20403, 21433,		ing by tensometer method,	
21534, 21639.		USSR study—	9194
reports on French nuclear policy		known constant, device induces	
and installation—	18325	lungs to maintain—	14825
Rumanian provincial, summaries—	958,	low—	
1073, 1187, 1299, 2497, 2595,		measurement, bibliography and	
2735, 2904, 4998, 5240, 5281,		index, errata	18273
6911, 7044, 7142, 8967, 9020,		sound transmission in helium	
9099, 9239, 9343, 10799, 10924,		and various gases—	19180
11002, 11136, 11201, 12629,		maximum pressure volume rela-	
12750, 12868, 12984, 14496,		tionships of human respiratory	
14568, 14642, 16048, 16139,		system	13648
16269, 16344, 16418, 18234,		measurements with rocket grenade	
18302, 18393, 18553, 19838,		experiment, 1960-63—	20621
19917, 20088, 20263, 20362,		multiple port pressure scanner	
21451.		valve	20550
Soviet—		solar wind on terminal shape of	
report on Israeli tourists visit to		geomagnetic field—	18254
Vil'nyus, Lithuania—	20124	sonic boom, ground measurements	
technical, current review (period-		for altitude range of 10,000 to	
ical)	3395	75,000 feet—	14903
world—		swept cylinder in vicinity of its	
epidemic reports	2501	intersection with wedge and	
JPRS serial publication, notice		flat plate—	16678
epidemiology reports—	5172,	transient pressures measured by	
7245, 9364, 20091		variable-reluctance transducer	13176

# INDEX 1964

Entry	Entry
Pressure—Continued	Prices—Continued
wall-pressure fluctuations and and pressure-velocity correla- tions in turbulent boundary layer ----- 0614	indexes, output per man-hour, methods and procedures of developing ----- 11296
see also Atmospheric pressure.	industrial output, USSR study ----- 21503
Pressure gages, see Ionization gages.	mathematics in price planning, USSR study ----- 16075
Pressure regulation, high-pressure regulating system prevents pressure surges ----- 14801	Oceanographic Office publications, increase, hearing ----- 17866
Pressure suits, see Life support sys- tems.	price and value in socialist econ- omy, USSR study ----- 16024
Pressure vessels:	price discrimination legislation, hearings ----- 14149
cryoformed AISI stainless-steel, tensile coupon tests at cryo- genic temperatures ----- 21763	price supports—
fracture safe design, laboratory fracture test criteria applica- tion ----- 13339	active and announced programs ----- 3210
neutron embrittlement of steels in reactor ----- 5613	program, identification of flue- cured tobacco varieties ----- 9929
reactor, structural design basis ----- 7814	private economy and private non- farm sector, productivity, earn- ings, etc., 1947-62 ----- 16615
Pressurized water reactor, see Re- actors (atomic).	public policy on administered prices, hearings ----- 537
Prestressed laminated wood beams ----- 8672	purchasing power of dollar based on wholesale price index, an- nual averages, 1890-1963 ----- 14712
Prestressed monolithic and segmented brittle structures ----- 21728	rising prices, impact on younger and older consumers ----- 5429
Prevention of accidents, see Accidents.	spot market price index and prices, weekly summary ----- 3400
Prevention of liquid spreading or creeping ----- 5604	wholesale, index numbers ----- 3584
Preventive medicine, see Medicine.	wholesale price index—
Pribilof Islands, fur seal investiga- tions, 1962 ----- 8618	monthly ----- 4160
Price, Earl A., heat-transfer measure- ments on flat plate and at- tached fins ----- 14873	prices and price indexes, month- ly ----- 4159
Price, Harold E.:	seasonal adjustment factors, 1948-61 ----- 1375
pilot acceptance factors in all- weather landing system develop- ment ----- 11353	weekly ----- 4158
utilization of acceptance data in de- scriptive model for determining man's role in a system ----- 20524	wholesale prices and price indexes, 1961 ----- 9457
Price, Howard L., mechanical prop- erties of Echo II laminate ----- 16690	see also Inflation (finance)—also names of commodities.
Price, Paul M., mining methods and costs, Mount mine, American Chrome Co. ----- 5475	Pricing policy, see Prices.
Price discrimination, see Prices.	Pride, Richard A., design, tests, and analysis of hot structure for lifting reentry vehicles ----- 11385
Price lists, see Government publica- tions—also subjects.	Primary production of bodies of water, errata ----- 11852
Price supports, see Prices—also names of commodities, etc.	Primates:
Prices:	platyrrhine monkeys, behavior patterns of night monkey ----- 21870
affect retail sales of broilers and meat ----- 14171	subhuman, cancer, bibliography ----- 18916
agricultural prices—	unanesthetized, restraint apparatus for thoracic roentgenographic examination ----- 1749
annual summary ----- 15128	Primer (books), ground water ----- 803
periodical ----- 3222	Primitive areas, see Wilderness areas.
agriculture, more important ones applicable, Hungarian study ----- 16058	Prince, E., calculation of magneti- zation vs. temperature curves for ferrimagnetic materials ----- 5595
Air Force guide for pricing, Air Force pamphlet ----- 7975	Prince Georges County, Md., land con- veyance to American National Red Cross, law ----- 259
consumer price index ----- 3362	Prince William Forest Park, general information ----- 5569
food distribution changes ----- 7419	Prince William Sound, earthquakes, Mar.-Apr. 1964, report, prelimi- nary ----- 11959
selected items and groups ----- 3363	Principles of vectorcardiography ----- 12687
short description ----- 21675	Prindle, Richard A., industry and occupation data from 1960 census by State, health man- power source book ----- 5653
costs and living conditions, statis- tical needs and resources, con- ference report ----- 13085	Pringle, Dorothy J., effects of varia- tions in carbohydrates, protein and fat intake on characteris- tics of growth of rats ----- 9976
deceptive pricing, guides against ----- 4726	Print-out devices, see Electronic com- puters.
demand and price situation ----- 3412	Printed circuits, see Circuits.
Eastern Europe, policy problems, translations ----- 12635	Printer-proofreader, see Proofreaders.
food costs, farm prices, information relating to agriculture, com- pilation ----- 10284	
formation, in industry, in relation to cost, USSR study ----- 16182	
index numbers, hydraulic turbine industry ----- 3589	

	Entry		Entry
<b>Printers:</b>		<b>Probabilities (mathematics)—Con.</b>	
hand compositor, examination announcement amendment.....	11934	miscellaneous studies.....	11440
monotype keyboard operator and slug machine operator, examination announcement, amendment.....	11934	probability number theory, new method, USSR study.....	14440
slug machine operator, examination announcement, amendment.....	17131	problems in stochastic systems, USSR studies.....	16552
<b>Printing:</b>		radio communications through layer E, USSR study.....	20058
guidelines for planning computer printout for printing press production.....	5627	random responses, prediction of peaks, fatigue damage, and catastrophic failures.....	9535
<b>Industry—</b>		random search method, progress toward goal, USSR study.....	14543
report.....	3936	Rayleigh process, confidence levels for sample mean and standard deviation.....	19176
union wages and hours.....	14702	sampling to 7 items per sample, distributions with reference to mineral industries.....	9498
occupations, employment outlook.....	7389	transition, planetary physics, expansion method for calculating atomic properties.....	16655
typography and design.....	6828	<b>Probate law and practice:</b>	
Printing Joint Committee, Government paper specification standards.....	2129, 15604, 19523	District of Columbia, authorize testator to add properties to existing trusts—	
Printing machinery, industry, review of 1963, outlook for 1964.....	4334	law.....	1921
Printing Week, International, see International Printing Week.		report.....	483
<b>Prints:</b>		<b>Probation:</b>	
art work, copyrighted.....	2249, 19609	casework, considerations in diagnosis and treatment.....	10076
catalog of copyright entries.....	10441	Federal probation (periodical).....	3484
commercial, copyrighted.....	6529, 19610	Federal system, persons under supervision, 1963 report.....	13556
Priroda (periodical): Translations.....	21478	<b>Probes:</b>	
Prison Industries, Inc., see Federal Prison Industries, Inc.		Mars and Venus orbiting missions, electrically propelled, constant thrust, parametric study.....	21755
Prisoners, see Prisons and prisoners.		oblique long-range high-frequency, correlations observed in ionospheric perturbations, solar flares, and geomagnetic storms.....	16995
Prisoners of war, aid to enemy or guilty of other misconduct, withholding and forfeiture of pay, report.....	15741	planets, theory of tumbling bodies entering atmospheres.....	14905
<b>Prisons and prisoners:</b>		single total- and static-pressure, use to measure average mass velocity in thin rectangular channels.....	21769
Atlantian (periodical).....	3271	space, theory of entry under conditions of high mass loss.....	7558
eagle (periodical).....	3427	2-point and 4-point probe resistivity measurements on rectangular bar-shaped semiconductor samples.....	13276
executions, 1930-63.....	18883	<b>Problems of cosmogony, USSR</b> .....	10978, 11055
Federal prison system—		<b>Problems of ingot temperatures, USSR</b> .....	5403
1964, hearing.....	10427	<b>Problems of wave-diffraction and propagation, USSR</b> .....	20016
print as Senate document, report.....	8428	<b>Problems of youth, fact book</b> .....	19605
Island lantern (periodical).....	8628	<b>Problemy arktiki i antarktiki (periodical):</b>	
national prisoner statistics series.....	11541, 18883	translations.....	5388
new era (periodical).....	3784	<b>Proceedings of National Museum</b> .....	7597-7609, 9650-52, 18820-823, 20655-659, 21802-803.
prisoners in State and Federal institutions, 1962.....	11541	<b>Processing of food, see Food processing—also names of foods processed.</b>	
prisons and justice, selection of writings of James V. Bennett, see also Penitentiaries.	12166	<b>Processing guide for mental hospitals</b> .....	11450
<b>Prisons Bureau:</b>		<b>Prochazka, Zora, labor force of Poland</b> .....	6048
employee housing, inadequate rents charged, GAO report.....	10606	<b>Proclamations, see subjects of proclamations.</b>	
report, 1963.....	9705		
Pritchard, D. L., spot cotton quotations, their relation to spot values and to average differentials.....	19089		
Pritchard, W. Maurice, subcritical assemblies.....	1772		
Private Employment Committee report.....	5639		
Private International Law, Hague Conference on, see Hague Conference on Private International Law.			
Private Law, International (Rome) Institute for Unification, see International (Rome) Institute for Unification of Private Law.			
Private laws, see Law.			
Private pilot's handbook of aeronautical knowledge.....	6732		
PRL, see Personnel Research Laboratory.			
<b>Probabilities (mathematics):</b>			
applied theory, USSR studies.....	9232		
collision for momentum transfer of slow electrons in nitrogen plasma afterglow.....	20526		



# INDEX 1964

Entry	Entry
Procurement, see Air Force—Air Force Department—Army—Cargo carriers—Defense Department—Defense Supply Agency—Engineering equipment—Government contracts—Government supplies—Military supplies—Mineral supplies—National Aeronautics and Space Administration—Synopsis of Government proposed procurement and sales contract awards—also names of commodities procured.	Production—Continued
Produce, see Agriculture products.	questions of statistics of prime cost of industrial production, USSR study ..... 14614
Produce markets, see Markets and marketing.	research reports ..... 4219-21, 5856-59, 7941, 16969
Producer delivery patterns in New England milk markets ..... 16958	technical level, USSR study ..... 11133
Production:	USSR—
agricultural—	costs ..... 16379
and marketing, future organization and control (paper) ..... 15188	heavy industry, cost ..... 16356
intensification, USSR study ..... 7086	increase effectiveness ..... 7078
application of scientific and technical achievements, Rumanian study ..... 6892	planning and economic management under socialism ..... 11086
automation relationship, current developments (paper) ..... 14713	structural shifts and increase of effectiveness of public production, problems ..... 16369
coal mining injury experience, related data analysis ..... 20477	see also Gross national product—also names of classes of commodities.
costs, methods of reducing, USSR articles ..... 14437	Production administrators, structure of production administration and wages in a sovkhos, translations on USSR labor ..... 19928
defense production act, extend—	Production credit associations:
hearings ..... 8368, 14128	loans and members borrowers, characteristics ..... 10501
law ..... 13892	operations, 1933-63, summary ..... 10502
reports ..... 12076, 14060	Production equipment, manufacturers' expenditures for new equipment ..... 10045
defense production act, inventories, effect of S. 2272, hearing ..... 15801	Production process in populations of simplest structure, analysis of ..... 18548
definition of area of production under fair labor standards act ..... 9876	Productivity, see Production.
facilities, Navy design manual, changes ..... 3203	Products, see Commercial products.
Industrial—	Proeulia, see Microlepidoptera.
indexes, 1961-63 ..... 17985	Professional examinations, see Examinations.
measurement in U.S., concepts, uses, and compilation practices ..... 10543	Professional guide PSD-PG (series) ..... 6070
productivity, data for measurement ..... 14707	Professional papers, Geological Survey ..... 804-812, 2420-23, 4783-98, 6903-10, 8763-72, 10635-647, 12510-512, 14340-347, 15943-552, 18125-138, 19781-790, 21352-356.
seasonal factors, 1961-63 ..... 17986	Professional workers:
Industry indexes of output per man-hour ..... 2969	characteristics, census 1960, announcement and order form ..... 15301
measuring productivity of Federal government organizations ..... 19273	social and economic characteristics, census of population, 1960 ..... 13773
metallurgical, mechanization and automation, USSR study ..... 18583	Professions:
national defense, report ..... 4462	health, message to graduates (address) ..... 7833
nonhomogeneous, algorithm for optimizing manufacture and distribution, USSR study ..... 9080	professional opportunities in Education Office, examination announcement ..... 6100
operative-productive planning, continuous method, USSR study ..... 16143	Professors, see Teachers.
organization of material-technical supply and material balances, fundamentals, USSR study ..... 14645	Profiles, careers in Department of Agriculture ..... 20933
output per man-hour, private economy, indexes ..... 7417, 20445	Profiles of newly independent states—
methods and procedures for developing ..... 11296	Profit:
output per man-hour index, selected industries ..... 5441	corporate, record of profits, and their role in our economic growth (address) ..... 10133
private economy and private non-farm sector, earnings, prices, etc., 1947-62 ..... 16615	export, low cost marketing aids ..... 19822
production and mathematical research, Rumanian articles ..... 6901	farm, improvement by cutting costs ..... 1700
productivity and technological trends in private economy, 1947-62 (statement) ..... 1387	large corporations ..... 4005
productivity development in United States (address) ..... 11298	profitableness and self-supporting operation, USSR study ..... 20172
	taxes, poverty, jobs, and profits (speech) ..... 11829
	Profit sharing, plan or trust, code of Federal regulations ..... 11684
	Progeny:
	registered, AI sires, DHIA cow index list ..... 9917
	wheat plant, radiosensitivity influenced by gamma irradiation of parent seed, USSR study ..... 9008
	Program aid series ..... 39, 4217, 5842-54, 7937-39, 9957-62, 11776-779, 13595-596, 15216-220, 16964-965, 19100-101, 20931-932.

# JANUARY-DECEMBER

	Entry		Entry
Program evaluation and review technique:		Project Long Look (manpower requirements in civil aviation industry):	
bibliographies	93, 6610	report	21292
NASA-PERT C computer systems manual	18725	Project M, data development and analyses in support of officer management	19164
PERT fundamentals—		Project management, concept in Army Materiel Command	20987
networking	6548	Project Mercury (man-in-space program):	
scheduling and replanning	6549	ballistic and orbital chimpanzee flights, results	5501
workbook	6550	summary briefing, hearing	414
Programmed instruction:		Project PACER, see Portable aircraft condition evaluator recorder	
and pedagogical problems, USSR study	9339	Project Pre-Bugby, base surge analysis	4298
chemistry teaching, USSR study	5044	Project Pre-Schooner (field cratering experiment):	21013
cybernetic teaching machines	12890	Project Sedan (Plowshare program): debris from underground nuclear detonation	5981
elementary school, USSR experience	7147	food-chain relationships of iodine-131 following 2 nuclear tests	123
first result of work with programmed textbook, USSR study	5301	stability of crater slopes, Nevada test site	122
handbook for programmers of automated instruction	11837	Project Syncom, synchronous communication satellite, global network	1440
learning and self-instructional media, research grants and contracts	2287	Projection, design, for propellants and interior ballistics, engineering design handbook, AMC pamphlet	19202
pedagogical bases of programmed teaching, USSR study	12677	Projectionists, see Motion picture projectionists	
prospects for its introduction, USSR study	14621	Projectors, see Light projectors	
research, annotated bibliography	14194	Projects aided under Cooperative Research and Demonstration Grants Program	15170
Soviet bloc literature survey, 1962-63	7056	Promotions:	
step size and error rate	20704	Army and Air Force Reserve officers, to existing unit vacancies, authorize—	19428
teaching machines, USSR studies	10985	law	13940
training methodology	13678	reports	17832
change	17049	discrimination at Philadelphia post office, hearing	2117
use of culling in training tasks	13323	naval officers, improve opportunity, hearing	8367
USSR educational aids	8953	Navy and Marine Corps officers, improved opportunity, extend—	15799
Programmers:		hearing	17252
automated instruction, handbook	11837	law	10246, 12103, 14118
electronic computer, employment outlook	9415A	Proofreaders:	
Programming (computers), see Electronic computers		printer, examination announce—	8169
Programming (planning):		ment	11934
inhibitor circuits, rate control devices and compilers, USSR studies	9329	amendment	8167
teaching, developments in USSR	2828	Propaganda:	
Progress in Missouri River Basin	3941	scientific-athelstic, and criminal-legal struggle, USSR study	20369
Progress in sport fishery research, 1963	10556	unconventional warfare, bibliography	20934
Progressive failure prediction	13642	see also Communism	
Prohibition era, role of Coast Guard in Rum War at sea	10122	Propagation, radio waves, USSR studies	20016
Project Apollo (man-in-space program):		Propellants:	
lunar exploration systems	7471, 9536	cryogenic feed systems for electrothermal engines	13153
Project Dribble	19263	design for projection, engineering design handbook, AMC pamphlet	19202
Project English, report	2286	feed system for ion engines, research and development	13147
Project Fire (flight reentry program):		heavy-molecule, performance in electron-bombardment thruster	16709
static longitudinal characteristics after reentry-package separation	5515	high energy, bibliography	13159
Project Firefly, 1962-63	13630	liquid, handling and storage	11793
Project FIST (fault isolation by semi-automatic techniques):		corrections	4597
concept	18905	molecular ion, theoretical bases for selection	7493
Project fog drops, investigation of warm fog properties and fog modification concepts	14785		
Project Gemini (man-in-space program):			
spacecraft dynamic-model investigation in spin tunnel	11387		
Project Gnome (plowshare program): close-in shock studies	5979		
intermediate range earth motion measurements	119		
sequenced gas sampling experiment	118		
shock induced transitions, history and recovery sample	120		
symmetry of neutron induced U-235 fission at individual resonances	5980		
timing and firing system	121		

# INDEX 1964

	Entry		Entry
Propellants—Continued		Propulsion—Continued	
noncryogenic, for electrothermal		propulsion.....	11381
thrusters.....	7552	naval hydrodynamics symposium.....	18851
errata.....	14848	nuclear—	
propulsion and propellants, AMC		for naval surface vessels, hear-	
engineering design handbook.....	95	ings.....	4423
rockets—		for surface vessels, report.....	1987
hydrostatic stability of liquid-		nuclear rockets, hearings.....	10346
vapor interface in—		out-of-pile thermionic gas cycle	
gravitational field.....	11399	space power systems, radiator	
low-acceleration field.....	18771	area characteristics.....	16721
interchanging, effect on com-		propulsion and propellants, AMC	
bustor performance.....	7536	engineering design handbook.....	95
pump inlet perturbations sup-		Prospecting:	
pressed by compensating-		geochemistry of rocks and related	
bellows device.....	16714	soils and vegetation in Yellow	
space storability, X-irradiation of		Cat area, Utah.....	21351
hydrazine, etc.....	18778	geophysical, Communist China.....	9361
time response of liquid-vapor in-		magnetic, technical instructions,	
terface after entering weight-		USSR study.....	11131
lessness.....	18782	USSR seismographic equipment.....	16382
solid—		see also Exploration—Magnetic	
extinguished, spontaneous reigni-		surveys.....	
tion.....	9580	Prospects, tasks and cooperation; in	
radiographic testing require-		medical industry, USSR.....	14611
ments, military standard.....	563	Prospects for utilization of lakes of	
spacecraft, behavior of confined		Latvia.....	21555
fluid subjected to nonuniform		Prosperity:	
source and wall heating.....	1476	favorable business climate, problems	
storage and feed system for electro-		and obligations (address).....	17156
thermal propulsion engines.....	13148	for all members of family (ad-	
see also Hydrogen.		dress).....	21095
Propeller blades, see Blades.		Prostate gland, and related tissues,	
Propellers:		biology.....	1502
aircraft—		Prostheses:	
current industrial report.....	8110, 17088	contemporary state of prosthetics	
flutter of power plant on flexible		and prosthesis, USSR study.....	7151
wing.....	18744	lavan, changes in human morpho-	
specifications and type certificate		logical arterioplasty, USSR	
data sheets.....	3241	study.....	14612
airworthiness standards, Federal		prosthetics research bulletin.....	13506
aviation regulations.....	17965	upper extremities, hydraulic, pneu-	
maintenance, repair, and alteration,		matic and electrical devices,	
civil aeronautics manual.....	3324	USSR study.....	5356
screw, controllable pitch, and ship		see also Artificial limbs.	
design, USSR study.....	14488	Protactinium, chemistry symposium,	
ship—		proceedings.....	8078
determination of ice load encoun-		Protecting trees against damage from	
tered by blades, USSR study.....	18336	construction work.....	20910
strength of screw propeller blades		Protection against radioactive fallout	
for ships used in ice naviga-		(Russian periodical):	
tion, USSR study.....	18239	translations.....	4983
slipstream, effects on V/STOL air-		Protective clothing, see Clothing.	
craft performance and stabili-		Protective coatings, see Coating mate-	
ty.....	21911	rials.	
Propensity to move.....	17025	Protective services for elderly peo-	
Property:		ple like.....	13379
minimum standards for urban re-		Protective services for older persons.....	6602
newal rehabilitation.....	4699	Protective shelters:	
senior citizens, assets, statistics.....	10072	fallout—	
tax, role of States in strengthen-		aboveground clay brick masonry	
ing.....	1A	core-type, design.....	6071
taxable values, census of govern-		architectural & engineering de-	
ments, 1962, errata.....	19285	velopment program, highlights.....	15345
see also Enemy property—Personal		architectural, engineering and	
property—Public property.....		consulting firms with certified	
Real estate—Surplus property.		analysts, directory.....	6065
Property rights:		bunker-type for beef cattle, farm	
family and property law, women—		building plan.....	4214
Iowa, summary.....	5764	Department of Defense program.....	21046
Ohio, summary.....	7860	design and analysis.....	15344
Prophylaxis:		charts, changes.....	11930
prophylactic and protective mea-		equivalent building method of	
sures in working with thorium,		fallout radiation shielding.....	21048
USSR study.....	14463	farm potato storage, farm build-	
typhoid fever, Rumanian study.....	9266	ing plan.....	4215
Prophylaxis pastes, see Dentifrices.		for 6 people.....	1710
Proportionality of social processes,		industrial architecture.....	4372
East Germany.....	10837	measurement of protection in	
Propulsion:		above-ground and below-ground	
aircraft, gas turbines, USSR		structures.....	5957
study.....	11169	medical care manuals.....	6068, 11929
chemical rockets, hearings.....	10346	errata.....	13792
electrostatic thrusters for space		qualified analysts, directory.....	17127
		shelter management plan.....	6072

# JANUARY-DECEMBER

	Entry		Entry
Protective shelters—Continued		Protozoa, common intestinal, of man.	15045
signs, posting instructions, hand-		Protractors, magnetic, setting angles	
books	8151, 13793	on machine tools speeded	13160
fallout radiation, calculating pro-		Providence, R. I.:	
tection	14938	occupational wage survey	16598
foreign research in construction	7872	principal electric facilities, map	673
licensing and marking, instructor's		real property acquisition practices	
guide	8154, 13794	and adequacy of compensation,	
planning dual-use military shelters	9902	hearings	14016
storage, storm and fallout shelter	1711	services for senior citizens, hear-	
structures, design series	6071	ings	12249
Protective Structures Division, profes-		Providence River:	
sional guide PSD-PG (series)	6070	and harbor, navigation improve-	
Proteins:		ment of harbor, engineer re-	
biophysical studies, USSR	9320	port	
biosynthesis, USSR study	20101	departmental edition	17954
content of corn inbred lines	7895	document edition	17670
electron paramagnetic resonance		Providencia, case study in economic	
spectra under gamma radiation		censuses	15325
and light, USSR study	9257	Prunes, production, use, value, by	
fish concentrate		States, 1962-63	15129
action now, operation lifeline	10562	Pruning:	
developments, past and present	10559	Douglas-fir, to increase timber	
Federal Government's research		value	2361
program, hearing	19597	early pruning reduces blister rust	
for human consumption, produc-		mortality in white pine plan-	
tion studies	8601	tations	8646
hunger, man and seas	10561	PSD-PG series	6070
lifeline of future, summary	10563	Psittacosis, white mice, effect of roent-	
resource	10560	gen irradiation on suscepti-	
functional groups in cortical nuclei		bility to ornithosis virus, upon	
of cutaneous and motor analy-		infection with aerosol of virus,	
sors in cats, comparative		USSR study	12653
chemoarchitectonics, USSR		Psychiatric aides, highlights from	
study	12923	survey	11447
Intertryptophan migration of energy		Psychiatric clinics, see Clinics.	
in protein systems, USSR		Psychiatric nurses, see Nurses and	
study	9265	nursing.	
macromolecular size change during		Psychiatric patients, see Mentally	
breakdown of ternary struc-		ill.	
ture, USSR study	16018	Psychiatrists, all-Union congress,	
metabolism, effect of cold	4251	resolution	7236
microbiological dewaxing process		Psychiatry:	
yielding protein-vitamin con-		Bulgarian Scientific Association of	
centrates	18798	Neurology, Psychiatry, and	
nervous system proteins, USSR		Neurosurgery, activities re-	
study	20375	port	12980
salmon diets, protein levels, feeding		careers in Public Health Service	14947
studies	8623	cybernetics, methods of applying,	
sarcoplasm proteins and serum pro-		USSR study	12716
teins during prolonged muscular		index for interdisciplinary research,	
activity and at rest, USSR		guide to literature, 1950-61	19011
study	12701	microsociological trends, USSR	
serum		study	7223
change, patients with chronic ra-		VA, new programs and their im-	
diculitis during treatment with		plications for volunteers	6868
vibration baths, USSR study	14575	see also Mental diseases.	
in relation to periodontal status		Psychidae, see Moths.	
and caries experience	1747	Psychoacoustics, relation of per-	
variations of intake, effects on char-		stimulatory adaptation to other	
acteristics of growth	9976	short-term threshold-shifting	
Protists, irradiated with gamma-rays		mechanism	5467
of Co <sup>60</sup> , use in presowing treat-		Psychochemical warfare, see Chemical	
ment of cotton seeds	1250	warfare.	
Protocol, amending interim conven-		Psychologists:	
tion on conservation of north		employment outlook	9407
Pacific fur seals	13469	psychologic selection of spaceship	
Protocols of Elders of Zion, febrici-		crew, USSR study	9127
cated historical document	17882	Psychology:	
Protons:		Bulgaria, conference	2934
damage in semiconductor devices	11354	educational, USSR studies	18197
damaging effect on irradiated seed,		engineering—	
influence of cysteine on, USSR		man and technology, USSR study	2668
study	2515	scientific organization, USSR	
effect of radiation on vestibular		study	18238
analyzer function, USSR study	2488	engineering and social, problems,	
exposure facilities, survey	17009	USSR studies	11015
primary galactic, nuclear collision		experimental, Rumanian treatise	2798
density in slab of aluminum,		labor, USSR study	7253, 20060
Monte Carlo calculation	9571	occupational, reflexometric and tre-	
radiation damage to semiconduc-		mometric methods, USSR	
tors	14775	study	1228
solar, manual	9615	problems of psychology (USSR	
tumor, USSR study	18249	periodical)	18317
Prototype cells, see Cells.		research, programming needs for	
		automated laboratory	1736



# INDEX 1964

Entry	
<b>Psychology—Continued</b>	
role in defining problems of Communist education.....	1328
tasks in CPSU ideological work, USSR study.....	998
temperament characteristics, experiment, USSR.....	2773
USSR studies.....	9259, 14636
see also Information theory in psychology — Psychopathology — Psychophysics.	
Psychomyiidae, see Flies.	
Psychoneuroses, see Neuroses.	
Psychopathology, French and American, sociological concepts, USSR study.....	10722
Psychopathy, see Mental diseases.	
Psychopharmacology:	
abstracts.....	3943
compounds, USSR study.....	1296
new preparations, USSR study.....	11095
Rumanian article.....	14417
Psychophysics, one-trial learning and quantum psychophysics, synthesis.....	15006
Psychosis, see Mental diseases.	
Psychotics, see Mentally ill.	
Psychotoxic drugs:	
control act of 1964—	
hearing.....	15812
report.....	17761
Psychotropic drugs:	
treatment of schizophrenia, clinical patterns, USSR study.....	7347
use in treating schizophrenia, USSR study.....	21444
see also Psychotoxic drugs.	
Public accommodations, see Civil rights.	
Public administration, business and public administration notes.....	3291
Public Advisory Committee on Venereal Disease Control, special committee report on venereal disease education.....	15070
<b>Public assistance:</b>	
aid to families with dependent children—	
eligibility review implications (address).....	13534
review, 1936-62.....	7845
applicants, D.C. Unemployment Compensation Bd. to advise D.C. Welfare Dept. as to status—	
law.....	17373
report.....	17718
cases, reasons for opening and closing.....	6004, 14217
demonstration projects.....	15165
determination of needs, simplified methods.....	6605
District of Columbia act of 1962, amend, report.....	17752
educational aid to families with dependent children, AFDC survey.....	11714
facts and figures, grants, etc.....	829, 18153
families, public-voluntary service, new alignments (address).....	1659
families receiving aid to families with dependent children, State cost standards, Jan. 1963.....	10496
Federal assistance for projects in aging.....	7848-50, 9884, 15166-167
Federal grants, statutory and administrative controls.....	20894
federally aided programs—	
Louisiana and Oklahoma, excessive financial participation, Welfare Administration, Health, Education, and Welfare Dept., GAO report.....	6764

Entry	
<b>Public assistance—Continued</b>	
federally aided programs—Con.	
North Carolina, deficient practices relating to matching funds, Welfare Administration, GAO report.....	8707
medical care, vendor payments by type of service, 1963.....	10499
mental health, convalescent leave from mental hospitals, agreements, etc., guides.....	8524
PAI (series).....	8526, 12354, 14216
problems in Appalachian region (remarks).....	6832
programs—	
protective services for older persons.....	6602
services for senior citizens, hearings.....	12249
public assistance reports.....	6602, 8525, 10497, 12355, 19866
public welfare staff training projects—	
learning and teaching.....	7851
services to families and children.....	7852
recipient rate and average payment in counties of U.S., June 1960, old age assistance, AFDC, etc., source of funds expended for payments.....	10498
administration, services and training.....	14218
special types—	
money payments, Oct. 1963.....	10500
program facts.....	14215
staff development as integral part of administration, Spanish edition.....	12356
State, plans under social security act, staff development provisions.....	8525
State salary ranges of positions in—	
employment security, etc.....	12355
public welfare.....	19807
statistical data, 1962.....	10667
statistics, monthly advance release under social security act, serving people in need.....	6603
unemployed-parent segment of aid to families of dependent children.....	3214
welfare field, developing facilities and services which provide people with help they need (remarks).....	10497
welfare in review (periodical).....	4105
statistical supplement.....	13535
welfare research report.....	4154
<b>Public buildings:</b>	
Agriculture Administration Building, historical study.....	21925
fixed equipment in Federal buildings, contracts for inspection, etc., report.....	21926
GSA guards training handbook.....	13384
historical study series.....	6462
maintenance—	
galley equipment at naval shore activities.....	7680
roofing manual.....	7681
make accessible to the handicapped, suggested specifications.....	11266
Pension Building, historical study.....	7681
sites for Federal buildings, land acquisition, how and why.....	4774
see also names of buildings, or places where located.	
Public bulletins, Census Bureau.....	157
Public contracts, see Government contracts.	

# JANUARY-DECEMBER

	Entry
Public debt:	
components of national debt, clar-	
ify, report-----	15763
increase in ceiling--	
hearings-----	528, 12164, 14133
laws-----	267, 13877
reports-----	326
330, 472, 12082, 12088, 14056	
statement of Secretary of Treas-	
ury Dillon-----	1641
our national debt-----	9862
Treasury Department circulars, 5730-31,	
7820-21, 9861, 11671-762,	
16897-900.	
Public defenders:	
provide for representation of de-	
fendants in criminal cases--	
law-----	17314
reports-----	378, 15555
Public Documents Division:	
classified list of Government publi-	
cations-----	11543
price lists-----	1550-53,
3093-95, 5642-43, 7683-86,	
9709, 11546-547, 13387-390,	
15036, 16824-827, 18886-888,	
20736-738, 21838-842.	
Public domain, see Public lands.	
Public education, see Education.	
Public employment, see Employment.	
Public funds:	
deposit regulations, Treasury Dept.	
circular-----	5728
special deposits of public moneys--	5727
Public health, see Health.	
Public health nurses, see Nurses and	
nursing.	
Public health schools:	
graduate training program, extend	
authorization--	
hearing-----	10321, 15816
law-----	17356
reports-----	13984, 17725
offering traineeships for full-time	
academic study, 1964-65-----	21857
Public Health Service:	
act, amend--	
hearings-----	15593, 15816, 17655
laws-----	17356, 17439, 21146
reports-----	13980,
13984, 17547, 17724-725, 17760,	
19459.	
advanced waste treatment research	
program-----	13391
alien medical examination program,	
study-----	2115
appropriations, 1965--	
hearings-----	8360, 8436
law-----	13904
reports-----	8288, 8420, 13951
supplemental, proposal-----	15609
Basic and Applied Sciences Branch,	
activities report, 1964-----	18891
careers in psychiatry-----	14947
catalog of numbered publications,	
1950-62-----	21854
commissioned officers--	
crediting military service in com-	
puting reserve retired pay--	
hearing-----	13995
law-----	21128
reports-----	15504, 17854
dependents, manual for civilian	
physicians and dentists pro-	
viding care-----	2254
student training and extern pro-	
gram-----	18895
Community Health Service Divi-	
sion, research grants program--	
conference with Children's Bureau,	
etc., 1963, preliminary report	
of actions-----	5662
Environmental Engineering and	
Food Protection Division, re-	
search grants, 1964-----	21856

	Entry
Public Health Service--Continued	
environmental health programs,	
career information-----	5652
expenditures and personnel data	
for 1961 and 1962-----	3110
grants and awards, 1962 funds,	
summary tables for extramural	
programs-----	14951
grants and awards, 1963 funds--	
health services, formula and	
project-----	1505
mental health training-----	13283
training grants, traineeships, fel-	
lowships, etc-----	7589
grants for--	
air pollution control programs,	
general information-----	18919
research in community health-----	1555
health information leaflets and	
pamphlets, lists-----	15058, 20761
health research facilities construc-	
tion program, Surgeon Gen-	
eral's report-----	10169
hospitals--	
dental internships-----	16831
pharmacy residencies-----	9719
laws, compilation-----	12144
metropolitan health program, re-	
search opportunities-----	9722
neurological and sensory disease	
service program-----	15060
Nursing Division, research grants	
and awards-----	9712
Operation Chlorine, report-----	5663
project grants program, community	
health services for chronically	
ill and aged-----	15166
public advisory groups, roster of	
members-----	11575
publications issued during 1963--	9723
regions, interstate carrier water	
supplies, inventory-----	7698
regulations on biological products,	
etc-----	11550
reorganization, hearings-----	17655
research grants--	
accident prevention-----	7700
accident prevention references to	
publications-----	7701
research grants of N.I.H., 1965,	
index-----	11451-452
sanitary standard for manufactured	
ice, recommendations relating	
to manufacture, processing,	
etc-----	13418
sanitation facilities for Indians,	
PHS authority under P.L. 86-	
121-----	15064
scientific information activities-----	7621
student loans, partial cancellation	
for physicians and dentists	
who practice in shortage areas,	
reports-----	4533, 17582, 17609
Surgeon General's Advisory Com-	
mittee on Smoking and Health,	
report-----	
excerpts-----	16845
report-----	5664
traineeship program for profes-	
sional nurses, short-term	
training courses-----	16844
traineeships for professional health	
personnel-----	11580
water supply and pollution control	
program, report, 1964-----	18891
weaknesses in accountability etc., of	
Govt-furnished and contractor-	
acquired property under cost	
reimbursement research and	
development contracts, GAO	
report-----	8746

# INDEX 1964

Entry	Entry
Public Higher Education in District of Columbia, President's Committee on, <i>see</i> President's Committee on Public Higher Education in District of Columbia.	Public lands—Continued
Public housing, <i>see</i> Housing.	legislative jurisdiction on certain Federal enclaves, adjustment, hearing, print additional copies, report..... 2223
Public Housing Administration:	mineral rights, sale in land patented under color of title act, report..... 17594
audit report, 1963 and 1962 financial statements, 1963 and 1962, GAO examination..... 8715	notify Congress of actions—
local authorities participating in low-rent programs..... 3689	hearing..... 8385
low-rent housing projects, high costs of sites in San Francisco area, GAO report..... 4761	report..... 8296
press releases..... 3919	our public lands (periodical)..... 3826
Public information:	review, hearing..... 8385
Army, basic guide, pamphlet..... 15268	sale, temporary authority—
availability from Federal departments and agencies, progress of study Sept. 1961-Dec. 1962, report..... 355	hearings..... 15810
clarify and protect right of public: hearings..... 6517	law..... 19416
report..... 15679	reports..... 8295, 17789
departmental offices, excessive costs resulting from separate operations, Defense Dept., GAO report..... 8720	statistics, 1963..... 9482
Government information plans and policies, hearings..... 401	timber management for today, tomorrow, and future (address)..... 12435
Government news from anonymous sources..... 12134	transfers and sales, hearings..... 19496
Post Office Department, PI series, 16816, 20730-731..... 1515-17, 11475	wildlife..... 20451
scientific, activities of Federal agencies..... 3069, 5573, 7621-23, 11475	<i>see also</i> names of States, etc., where lands are located.
scientific and technical information in Federal Government, status report..... 8541	Public law 480, <i>see</i> Agricultural trade development and assistance act of 1954.
U.S. private mass media, impact abroad, hearings..... 4497	Public laws, <i>see</i> Law.
welfare programs, report of meeting, June 11-12, 1964..... 16923	Public libraries, <i>see</i> Libraries.
Public Land Law Review Commission:	Public management, <i>see</i> Administrative management.
appropriations, 1965, supplemental proposal..... 15421	Public money, <i>see</i> Public funds.
establish—	Public open-space programs and activities, National Capital region..... 7583
hearings..... 15810	Public papers of Presidents of United States..... 10540, 14254
law..... 19414	announcement and order form..... 15037
reports..... 385, 6301, 17762	Public printing and binding, paper specification standards..... 2129
Public lands:	Public property:
classify for disposal or interim management under multiple use principles—	administration, Navy handbook, revised pages..... 3084, 15014
hearings..... 15810	code of Federal regulations..... 10539
law..... 19415	Federal property and administrative services act, amend—
reports..... 8294, 17824	law..... 6176
coal development on public domain, promote—	reports..... 4548, 6462, 1222
law..... 17385	Federal, supply management report instructions, NGB pamphlet..... 14944
report..... 15560, 17784	Government-furnished and contractor-acquired property under cost reimbursement research contracts, weaknesses in accountability and management, Public Health Service, GAO report..... 8746
code of Federal regulations..... 6656, 10541	industrial, NASA control manual..... 7474
development of isotope techniques for relocation of land monuments..... 19253	maintenance of ground structures, Navy manual..... 11731
exchange public domain lands heretofore withdrawn and reserved for use of Hanford project of Atomic Energy Commission, authorize—	naval shore activities, maintenance of grounds..... 7873
law..... 17415	Public relations:
reports..... 15576, 17774	principles, etc., Navy applications..... 20693
hydrology of public domain (series)..... 814	workers, employment outlook..... 9383
Interior Department decisions..... 3602	Public roads, <i>see</i> Roads and highways.
digest..... 4831	Public Roads Bureau:
laws, background information operation..... 12278	career opportunities, engineers..... 1569, 20775
	electronic computer program library, memorandum..... 7713
	Federal aid highway program—
	administration, deficiencies and problem areas, GAO report..... 8710
	policy requirements, improper waiver, GAO review..... 6768
	rights-of-way activities in California, legislative and policy requirements, GAO review..... 6771
	films available..... 13427
	inadequacies in administration of right-of-way activities of Federal-aid highway program, New Jersey, GAO report..... 21338

# JANUARY-DECEMBER

Entry	Entry
Public Roads Bureau—Continued	
Inter-American Highway program in Costa Rica, unnecessary costs resulting from inadequacies in administration of right-of-way activities, GAO report—	12498
press releases—	3920
publications, lists—	15072
report, 1963—	9738
secondary road administration, 2d progress report on activities of Joint AASHONACO Committee—	13429
Public schools, <i>see</i> Schools.	
Public services in USDA, address—	5860
Public utilities, holding companies, security transactions and holdings—	3813
<i>see also</i> Electric utilities.	
Public Utilities Commission of District of Columbia, report, 1962—	2258
Public welfare:	
code of Federal regulations—	8577
homemaker services—	11716
relief rolls to payrolls, community work and training program—	8526
<i>see also</i> Social work and problems.	
Public works:	
accelerated program—	
approved projects, directory—	3207
Federal aid to States, etc., to reduce unemployment—	
areas eligible for immediate public works assistance list—	413
hearings—	412
report—	2092
Increase authorization—	
hearings—	6525, 10433
report—	12215
maximum grants-in-aid for eligible areas—	88, 11618
retrospect and prospect, staff report—	10432
acceleration act of 1963—	
hearings—	412
report—	2092
acceleration, budget increase, amendment—	281
Alaska, amend act to authorize settlement of claims—	
law—	1958
report—	371
appropriations, 1964—	
hearings—	518, 520
law—	1984
reports—	343, 510, 4458
appropriations, 1965—	
hearings—	12119, 15796, 798
law—	17370
reports—	12098,
	13929, 15767, 17572
code of Federal regulations—	10539
Engineers Corps—	
civil works construction, labor and material requirements—	13069
civil works projects, recreation, general information—	625, 19659
Engineers Corps, civil works activities—	
finance and fiscal accounting and reporting, regulations—	17955
report, 1963—	
departmental edition—	8506, 10481
document edition—	8253, 10177
HHFA planned program, additional funds, hearing—	4573
maintenance, engineered performance standards—	
electrical, electronic handbook—	5773
engineer's manual—	5774
heating, cooling—	
ventilating formulas—	7870
ventilating handbook—	7871
paint formulas—	5775
paint handbook—	5776

Entry	Entry
Public works—Continued	
maintenance, engineered performance standards—Continued	
railroad trackage—	
formulas—	1671
handbook—	1671
national program for unemployed, should Federal Government establish? national college debate topic 1964-65—	19450
planning programs, inadequate collections procedures, etc., by Community Facilities Administration, HHFA, GAO, report—	4764
Public Works Committee, House:	
calendar—	3656
committee prints—	410,
	413, 10343, 12153, 21213
hearings—	411-412,
	2121-23, 4505-6, 6369, 8395-96,
	14015-16, 15602-603, 17663-
	664, 19521, 21210-212.
investigations and studies, expenses, report—	374
joint meeting with Public Works Committee, Senate, and delegates to Pan American Highway Congress—	10435
reports—	2076,
	2087-88, 2092, 4459, 6327,
	8329, 8346-47, 10200, 10210-211,
	10218, 10221, 10223-224, 12111,
	13954, 15532, 17627, 19467-473,
	19487-488, 19490.
travel authorization, report—	8341
Public Works Committee, Senate:	
additional staff and funds, authorization, report—	6458
calendar—	3674
committee prints—	10432,
	10435-437, 17889, 21243
hearings—	546,
	4506, 6525, 10433-434, 12280,
	15818-821, 17890.
investigations and studies, scenic highways, establish national system, authorize, report—	462,
	2197
joint meeting with Public Works Committee House, and delegates to Pan American Highway Congress—	10435
reports—	462-465,
	474, 2219, 4529-30, 12191,
	12212-215, 14087-93, 14103,
	17720, 17723, 17728, 17753-754
Public Works Coordination and Acceleration Office, establish, areas eligible for immediate public works assistance, list—	413
Publications:	
American, distribution in Soviet bloc, hearings—	8381
Federal item identification guides for supply cataloging—	12296
supplements—	8477
<i>see also</i> Government publications—	
Military publications— <i>also</i> names of departments, etc., issuing publications— <i>also</i> subjects.	
Publicity, handicapped, program guide, handbook—	18618
Publishing, industry report—	3936
Puckett, H. B.:	
automatic feeding equipment for livestock and poultry—	7918
single-phase electric motors for farm use—	19070
Puddycomb, Ralph H.:	
free fall drop tests of F-100D ejection seat occupied by articulated dummy or live jumper—	5884
human free-fall trajectories—	13617
Pueblo Bonito <i>see</i> Bonito Pueblo.	

Do not order from index; see indicated entry

Page 521



# INDEX 1964

	Entry		Entry
Pueblo, Colo., stratigraphy of Niobrara formation	14344	Pulp—Continued	
Pueblos, <i>see</i> Picuris Pueblo.		industry report	3952
Puente Hills, geology and oil resources, eastern area	10641	<i>see also</i> Wood pulp.	
Puerto Rico:		Pulp mills:	
agriculture department, directory, 1964	9906	hardwood, establish in an S-county area of western Kentucky, technical and economic feasibility	17027
amateur alien radio operators, authorization to operate—		pine, possibilities in north Alabama	16892
hearing	10823	Pulp wood, <i>see</i> Wood pulp.	
law	12008	Pulpboard:	
reports	10226	current industrial reports	3390, 21034
census of population, 1960, characteristics	6035	particleboard	10056
censuses of population and housing, 1960, processing the data	1808	particleboard industry, review of 1963, outlook for 1964	6002
climatological data	3329	structural insulating board, trade recommendation	11435
coast pilot, supplement	6108	tariff classification of certain particleboard—	
fair labor standards act, minimum wage rates	15148	law	13888
housing census, 1960	1806	reports	8314, 12236
labor organizations, reporting, register	16571	Pulpwood, <i>see</i> Wood pulp.	
mineral industry, minerals yearbook chapter	20491	Pulse code modulation, <i>see</i> Radio pulse code modulation.	
minimum wage status	13549	Pulse-code-modulation-frequency-shift system, keyer circuit improves PCM, conversion for radio transmission	13195
municipal waste facilities, 1962 inventory	3103	Pulse frequency modulation telemetry, <i>see</i> Telemetry.	
municipal water facilities	18908	Pulse generators, AN/UPM-55, Navy calibration program, technical manual	1530
political status, settlement—		Pulsejet engines, <i>see</i> Engines (aircraft).	
hearing	6513	Pulses:	
law	6182	frequency-modulated, use of recirculators for compression, USSR study	5020
report	504	frequency-modulation telemetry—	5529
population estimates—		high-voltage nanosecond, circuit with ferrite for producing	20309
by age	8125	of fast electrons, excitation effect on cadmium telluride, USSR study	16022
July 1, 1963, with preliminary estimates for July 1, 1964	17105	short-pulse techniques	7653
principal electric facilities, map	680	Pumice, minerals yearbook chapter, 1963	20497
public school finance program, 1961-62	4633	Pumpkin Buttes, geology and uranium deposits of area of Powder River basin	15941
Resident Commissioner, clerk hire basic allowance, increase, report	17589	Pumpkins, growing	4200
salaries of white-collar workers, May-June 1963	7415	Pumps:	
standard metropolitan statistical areas, 1963, defined by Bureau of Budget, map	13775	axial-flow rotor, design and performance	11415
storm warning facilities chart, 1964	13525	cryopumping of hydrogen in vacuum chambers is aided by catalytic oxidation of hydrogen	14803
surface waters, chemical analyses, 1961, inventory	6827	current industrial reports	19297
tax treatment of U.S. concerns with Puerto Rican affiliates, hearings	17892	farm	3390
trees, common species	16945	summary for 1963	8117
United States trade, monthly report	3535	Federal item identification guides for supply cataloging	12292
women workers, 1960	9898	supplements	3473
Puerto Rico Bankers Association, business and governmental officials, annual seminar (address)	6116	fire, operating procedure	11874
Puget Sound, geologic studies in lowland (series)	809	industry, review of 1963, outlook for 1964	6011
Patillet, Gerard, relief	12195, 13859	positive displacement types, method of rating, military standard	8466
Pulaski County, Ill., development program, suggestions for making more effective	13660	pumping station for fire protection of hangars, Air Force, engineering manual change	4667
Pulga, Calif., motor carrier accident	6864	vacuum, fine-particle filter prevents damage	13192
Pulkovo, USSR, Astrophysical Laboratory, general information	20298	Punched card machines, <i>see</i> Accounting machines.	
Pullets, <i>see</i> Chickens.		Punched card systems, calculating nutritive value of diets, manual of instructions	20002
Pullman Company:		Punta del Este, Uruguay, Che Guevara's speech, Aug. 1961	1289
emergency board report	2290	Pupil accounting for local and State school systems	21270
transportation statistics, 1962	850		
Pulmonary diseases, Veterans Administration research	21915		
Pulp:			
and wood species, yields for various processes	12450		
current industrial reports	3390		
industry, employment outlook	9450		

Entry

3952

Pupils (students), *see* Students.

Purchasing:

7027

6892

1034

0056

6002

1435

3883

2236

3195

1530

5020

5529

0309

5022

7653

0497

5941

4200

1415

4803

9297

3390

8117

2292

3473

1874

6011

8466

4667

3192

0902

1289

1270

Entry

Agricultural Stabilization and Conservation Service, reports..... 3953  
 consumer buying indicators, series..... 183,  
     8132, 11907, 17108

consumer buying intentions, automobiles, etc..... 11907, 17108

food buying guide for type A school lunches..... 9959

power of dollar based on wholesale price index, annual averages, 1890-1963..... 14712

surplus personal property, how to buy from Defense Dept..... 15831

Purchasing agents, employment outlook..... 9408

Purees, *see* Tomato puree.

Purification of water, *see* Water purification.

Purnhagen, Tom G., automatic plotting of spin-wave instability threshold data..... 19158

Putnam, John F., pupil accounting for local and State school systems..... 21270

Putnam, P. A., comparison of chromic oxide and conventional methods in digestion trials using steers fed pelleted rations..... 19105

Putnam County, Tenn., soil survey report..... 3139

Putnam group of eastern Connecticut..... 19780

Puyallup, Wash., aircraft accident..... 201

Pyatt, Edwin E., pollutant distribution in tidal estuaries..... 19791

Pyle, Jon S., flight pressure measurements on forward fuselage of X-15 airplane..... 5521

Pymatuning Lake:

Pennsylvania-Ohio compact, amend rel. to use of motorboats, consent of Congress..... 15388

law..... 10230

reports..... 20514

Pyridoxine, *see* Vitamins.

Pyrites, minerals yearbook chapter..... 3030

Pyroceram, crystallized glass ceramic, rolling-contact fatigue process..... 11355, 14770

Pyroelectric detection techniques and materials..... 11355, 14770

Pyrohydrolysis, *see* Hydrolysis.

Pyrometers:

correction due to dimer absorption in Cs vapor..... 5876

radiometer-pyrometer for analysis of gaseous combustion products..... 16710

Pyrometry, radiation, nonlinear-averaging errors..... 16711

Pyrophosphates, calcium, inactivation of stannous fluoride..... 5909

Pyrophyllite, minerals yearbook chapter..... 18709

Pyrotechnics, systems parachutes, tests..... 15227

Pyrrhotite, calcine, sintering..... 1435

Pyrrrolidone, *see* Polyvinyl pyrrolidone.

Q

Qatar, labor conditions..... 11290

Quacks and quackery, medical quackery affecting the elderly, hearings..... 14122, 15788, 17862

Quality assurance provisions for Government agencies..... 14794

Quality Bedding Co., relief..... 17700, 19388, 21184

Entry

Quality control:

analytical service of Radiological Health Division, interlaboratory study of iodine-131 surveillance measurements in milk..... 20743

quality of consumer goods should be controlled, USSR article..... 21425

representatives handbook..... 4598

Quality of rural and urban housing in Appalachian region..... 10454

Quality publication NPC 200 (series)..... 14794, 21740

Quality requirements for hand soldering of electrical connections..... 21740

Quantum mechanics: interference properties of photons..... 4230

molecules study..... 14890

Quantum oscillators, *see* Lasers.

Quantum theory: electromagnetic properties of uniformly magnetized electron gas..... 11437

recirculator with quantization..... 5915

Quarantine, plant, import requirements of foreign countries for oak logs and lumber, addition..... 16938

*see also* subjects.

Quarantine stations, *see* names of stations or places where located.

Quarrel application and test methods for cotton thread..... 5671

Quarter century of financing municipal highways, 1937-61..... 18928

Quarterly:

NOTE.—For all publications which began with the word "Quarterly," *see* subject, or name of department, etc., issuing publication.

Quartermaster Corps of Army, textile series reports..... 5671, 11590, 13430

Quartermaster 3 & 2, Navy training courses..... 7648

Quarters:

Barber's Point, Naval Air Station, uneconomical practices, GAO review..... 18091

Government, administration deficiencies at Dow Air Force Base, Maine, GAO report..... 6763

Quartz:

crystal, electronic grade, minerals yearbook chapter..... 16631

strontium migration through quartz sand..... 5991

Quartzite, Precambrian, sequence along Coal Creek, relationship to Idaho Springs Formation, Front Range, Colo..... 18135

*see also* Dripping Spring quartzite formation.

Quasha, Mrs. William H., relief..... 434

Quaternary ammonium compounds, kvateron, preparation and clinical use, Armenian studies..... 12671

Quaternary period:

advances and recession of Quaternary glaciers and their relations to rises and falls of Lake Bonneville, study of sequences..... 15950

geology of Kenai Lowland and glacial history of Cook Inlet region, Alaska..... 10644

Gulbik formation in northern Alaska..... 10635

Quattlebaum, Charles A., enactments by 88th Congress concerning education, etc..... 21242

Quattrone, Phillip D., animal calorimeter..... 19185

Queens Borough, *see* New York City.

Queens County, N.Y., northeastern hydrogeology..... 6816

# INDEX 1964

Entry	Entry
Questions and answers about eradicating hog cholera-----	16967
Questions and answers on guaranteed and direct loans for veterans-----	5745
Quetico-Superior area, recreational use-----	12476
Quick-acting clutch disengages idle drive motor-----	20549
Quick look at hours worked under fair labor standards act as amended, 1961-----	15149
Quicksilver, <i>see</i> Mercury-----	
Quigley, Hervey C., flight investigation of performance, handling, etc., of deflected slipstream STOL transport airplane, etc-----	9594
Quillan lecture-----	4308
Quinault Indians, judgment funds, disposition, report-----	17839
Quinacridone, synthesis of 2,5-disubstituted, USSR study-----	5334
Quirk, Richard, exploration and testing ilmenite-bearing sands-----	2981
Quon, J. E.: combustion of human waste and product recovery-----	7986
gross chemical changes of human waste undergoing thermal decomposition-----	7985
Quong, Joe, deportation suspension, rescission-----	17490
<b>R</b>	
R.A.D.C., <i>see</i> Rome Air Development Center-----	
R. D. Bailey Reservoir: designate-----	21211
hearing-----	19468
reports-----	
R.E.A., <i>see</i> Rural Electrification Administration-----	
R.O.T.C., <i>see</i> Reserve Officers' Training Corps, Army-----	
Ranen, Helen P., indexes to Oak Ridge National Laboratory master analytical manual-----	13712
Rabbits: atherosclerosis, anti-atherogenic action of cortisone and methyl-androstendiol, USSR-----	12730
immune, biosynthesis of antibodies induced by ribonucleic acid from lymphatic nodes and spleen, USSR study-----	9114
influence of low concentration of light aerolons on cardiac activity-----	5373
internal organs and skin, morphological changes from local ultrasonic irradiation, USSR study-----	1030
raising, information-----	20917
skin homotransplants, prolonging life span by means of alkylating substances-----	10916
Race for inner space, special report to the nation-----	8796
Race problems: Africans in Moscow, disillusionments-----	6881
apprenticeship reports by State advisory committees-----	6076
awareness of moral, economic and social cost of discrimination (remarks)-----	3089
discrimination in promotions at Philadelphia post office, hearing-----	2117
discrimination, some next steps (address)-----	1599
Race problems--Continued education-----	
deny federal assistance to institutions which practice racial discrimination, hearings-----	2110, 6514
federally affected areas, assistance, nondiscrimination amendment, hearing-----	396
equal opportunity in housing-----	21367
family housing and Negro serviceman-----	10099
integrating Maryland training schools-----	13782
public accommodations, eliminate discrimination-----	
hearings-----	4577, 6514
report-----	6465
racial discrimination, problems, eliminating (remarks)-----	5637
remarks-----	19367
segregation and desegregation in public schools conference, synopsis-----	6074
segregation in public schools--cities in North and West, Buffalo-----	10097
Southern States, 1963-----	10098
<i>see also</i> Discrimination in employment-----	
Racelis, Manuel D., relief-----	19548
Races of man, blood pressure of adults, by race and area, 1960-62-----	16846
Racks, electronic assembly rack panels snap on and off-----	14828
Radar: ARTS, advanced radar traffic control system, Atlanta facility training manual-----	14221
auroral echoes at 19.4 megacycles per second, study-----	20959
broadband linear array for space surveillance-----	16800
continental defense system, agreement with Canada-----	15123
continuous-wave principles, USSR study-----	6896
course, fire control technician training, trainee's guide-----	7638
equipment, new, USSR study-----	12798
fire control, special circuits, trainee's guide-----	20683
four-frequency master console-----	5500
Greenland, N-34 station, under-snow structures-----	17941
investigation of meteors at high rates of detection-----	5522
land mass simulation, digital techniques-----	1528
final report-----	11489
military air route surveillance facilities, maintenance, FAA handbook-----	12381
PAR precision approach facilities maintenance, FAA handbook-----	14226
photographs and gust loads in 3 storms-----	11705
planetary, paramagnetic amplifier, USSR study-----	7244
radar-tracked falling spheres, use in measuring upper-air temperature and density-----	9533
reflectivity of storms containing spongy hail-----	19152
sole-source procurement of portable sets, unnecessary costs, GAO report-----	21342
terminal service area control concept, evaluation-----	4268
test set TS-642/UPM-56, instrument calibration procedure, technical manual-----	11521
turbulence measurements in free pure atmosphere, USSR study-----	18389
vertically-directed, determination of structure of occlusions-----	7965

Entry		Entry	
<b>Radar tracking:</b>		<b>Radiation—Continued</b>	
and on-board observation data, used in midcourse guidance.....	9597	fishery products—	
automatic measurement of coordinates, USSR study.....	2752	irradiated-pasteurized.....	8087
Doppler method using simple CW beacon, experimental results.....	9585	preservation.....	8083
frequency tracking square wave oscillator, analysis.....	20619	fluorine, irradiation, and tumors, USSR study.....	18581
reentry voice communication system for use in conjunction with radar tracking equipment.....	16653	food irradiation, sub-sterilization doses, effect on storage life of clams and haddock filets.....	5988
RADC, <i>see</i> Rome Air Development Center.		forces in inhomogenous media.....	13641
Rader, George L., relief.....	4448, 6142	hazards—	
Radforth, N. W., trafficability tests on confined organic terrain (musk-keg).....	21283	control, State laws and regulations, summary.....	14675
Radial acceleration, <i>see</i> Acceleration.		health hazards of exposure, answers to frequent questions.....	18901
Radiance of earth and its limb in middle ultraviolet.....	14885	radiological emergency procedures for non-specialist.....	15291
Radiant energy:		hygiene, biogeochemistry, problems, USSR study.....	7000
heat transfer, measurement with thin-film resistance thermometers.....	9532	hygiene, USSR studies.....	1053, 14455
surface energy balance in arid lands agriculture, 1960-61.....	4219	impact flash at low ambient pressure.....	7548
Radiant heater for vacuum furnaces offers high structural rigidity, low heat loss.....	13178	influence on epithelial cells, USSR study.....	2924
Radiation:		ionizing, effect on protein synthesis of living organism, USSR study.....	19890
accidents due to equipment damage or breakdown, organization of medical countermeasures against, East German study.....	18324	irradiated animals—	
antiradiation properties of gallates, USSR study.....	9108	cause of decrease in natural resistance to live brucellosis vaccine, USSR study.....	12853
anti-radiation properties of polyphenols, USSR study.....	7343	with influenza, effect of bone marrow cell injections, USSR study.....	9330
anti-ray effect of gallates under conditions of irradiation with 1000 roentgens, USSR study.....	14615	irradiated food fed to mice, harmful effects.....	110
application of radiation-pasteurization processes to Pacific crab and flounder.....	19250	irradiation—	
biological effect, primary and initial processes, USSR study.....	7202	chronic, latent effects on longevity and peripheral blood elements of monkey.....	73
celestial background radiation.....	13626	testing ceramic fuels, summary report.....	8051
cobalt-60, scattered components produced in brick structure.....	15236	ultrasonic, of rabbits, morphological changes in internal organs and skin, USSR study.....	1030
corrosion and irradiation, USSR study.....	18323	irradiation with microwaves, temperature reaction of skin, USSR study.....	7063
cyanogen compounds, protecting action, USSR study.....	20416	isotopes and radiation technology, review of recent developments.....	3625
damage to semiconductors by high-energy electron and proton radiation.....	14775	Japanese Association for Radiation Research on Polymers—	
devices, incidental and restricted, FCC rules and regulations.....	3988	report, 1958-59.....	11853
effects—		report 1960.....	13689
in semiconductors.....	14891	report 1961.....	13690
of certain protective substances on changes in reactivity of tissue sulfhydryl groups in irradiated animals, USSR study.....	2493	measurements, environmental, in southeastern, central, and western U.S., 1962-63.....	21012
on life processes, bibliography.....	11865	microbiology, problems in sanitary protection of reservoirs, USSR study.....	21631
on mammalian eye, literature survey, index.....	21015	micronecrotic foci of hemopoietic organs of animals exposed, USSR study.....	5229
on RNA and RNA metabolism in cells of human malignant tumor, USSR study.....	14574	molecular genetics and effect on heredity, USSR studies.....	4895
on synthesis of ribonucleic acid in fish embryos, USSR study.....	9218	mutual coherence and array theorem.....	9972
Soviet research.....	1337	nuclear—	
visible damage of alpha particles on sodium chloride crystals.....	13243	accident contamination control, effect on ceramic reactor-fuel materials.....	5982
environmental measurements, ionization chambers.....	1770	guide.....	9967
environmental surveillance.....	20748	in biology USSR study.....	18481
equilibrium in planetary atmospheres.....	18742	outgoing, spectral distribution.....	14917
external magnetic field, kinetic equations for plasma, solution.....	13699	pasteurization—	
		food program, summaries of accomplishment, 3d annual contractors meeting, 1963.....	11868
		shrimp.....	13706
		physical aspects of irradiation, recommendations of ICRU.....	9632
		physics, USSR studies.....	12799



# INDEX 1964

Entry	Entry
Radiation—Continued	Radiation illness:
physiological reactions to irradiation and other factors, USSR studies -----	acute—
10921	course of shock caused by compression of soft tissues, USSR study -----
postirradiation restoration of yeast cells, USSR study -----	1255
9219	dogs, humoral component in effect of bone marrow transplantation, USSR study -----
protection—	4905
background material for development of standards -----	effect of sex hormones, USSR study -----
15902	1254
effect of chemical compounds, USSR study -----	hemopoietic tissue, state under conditions of bone marrow transplantation, USSR study -----
20371	14592
in industry, USSR studies -----	mechanism of action of protective-therapeutic combinations, USSR study -----
2522	2491
radiation and leukosis, USSR study -----	pathological anatomy experiment, atlas -----
2888	4291
radiation in perspective, illustrated text of film lecture -----	USSR problems in early diagnosis of radiation sickness -----
4310	1303
radiative transitions, USSR studies -----	associated with closed craniocerebral injury, morphological changes in cat brain, USSR study -----
16411	7320
radioecology, terrestrial and freshwater, bibliography -----	autoinfection, failure of antibiotic therapy -----
125, 15285	4939
recombination, in calcium telluride during excitation, USSR study -----	bone marrow transplantation problems, USSR study -----
16022	16028
resisted shock waves, direct solution of governing equation -----	combating radiation sickness, USSR study -----
5519	21493
resistance of plastic materials, USSR studies -----	effects, USSR studies -----
18304	12661
sanitation in radiation, USSR studies -----	injuries—
1229	effects on metabolism, USSR study -----
sensitivity of chromosomal apparatus of epithelial cells of mouse cornea, effect of suprarenal hormones, USSR study -----	restorative processes, USSR studies -----
2890	21408
shielding, AEC test structures, response studies -----	injury and sickness, treatment, USSR study -----
5992	5193
shields for thermal control of vehicles on sunlit side of moon -----	peculiarities of the course of radiation sickness in mice subjected to treatment with marrow and by immunization, USSR study -----
9573	14618
shortwave, spectral distribution, investigation -----	proton and gamma-radiation, effect on vestibular analyzer function, USSR study -----
14920	2488
solar cell damage -----	restorative processes in duodenal mucosa, USSR study -----
7513	2644
source from slotted-cylinder antennas in plasma environment -----	role of functional stress in localization of radiation injury -----
7544	4900
synchrotron calculations for artificial radiation belt -----	therapy, USSR experimental studies -----
7512	8952
techniques, radiochemical analysis -----	trace elements determination in dermatites, USSR study -----
16741	16180
technology, literature survey -----	treatment, USSR studies -----
116	20071
theory of radiation from slotted conducting plane in plasma environment -----	USSR, research on radiation sickness and protective measures -----
20641	12774
thyroid gland irradiation and other radiological studies, USSR articles -----	2548, 7342, 20254
21447	Radiation laboratories:
TIROS II data recorded over New Zealand at night -----	decontamination of radioactive waste waters, USSR study -----
7494	20366
see also Albedo—Alpha particles—Beta rays—Black body—Cosmic rays—Electromagnetic radiation—Gamma rays—Gray body—Heat transfer—Infrared rays—Ionizing radiation—Radiant energy—Radioactivity—Radioprotective agents—Solar radiation—Thermal radiation—Ultraviolet rays—Van Allen radiation belts—X-rays.	report on visits to some European laboratories -----
9598	1779
Radiation balance, theoretical studies.	Radiation monitoring:
Radiation Council, see Federal Radiation Council.	North American networks employed in monitoring airborne fission products, intercalibration -----
Radiation detection instruments:	18860
improved solid state radiation detector -----	USDA radiological monitoring handbook, errata -----
204	5814
radiation dosimetry aboard spacecraft of 8th Mercury-Atlas mission (MA-8) -----	Radiation Protection and Measurements National Committee, see National Committee on Radiation Protection and Measurements.
18731	
solid state infrared detection -----	Radiation pyrometry, see Pyrometry.
5867	Radiation sickness, see Radiation illness.
whole body counters -----	19269
see also Radiation balance—Radiological telemetering systems—Scintillation counters.	Radiation weapons, see Weapons.
Radiation dosimetry aboard spacecraft of 8th Mercury-Atlas mission (MA-8) -----	Radiative cooling, see Cooling.
18731	Radiative heating, conical shapes entering atmospheres of Venus and Mars at suborbital speeds. -----
Radiation Effects Laboratory, wastes disposal, results of experiments -----	3026
8753	

	Entry
<b>Radiators:</b>	
central finned-tube, flat, direct-condensing, analysis and design procedures	20601
fin-tube—	
configurations, heat-rejection and weight characteristics	14898
heat transfer including longitudinal heat conduction, etc.	3028
fin-tube space, with tapered fins, heat rejection and weight characteristics	7535
moving belt system for waste heat rejection in space, heat-transfer and weight analysis	16677
space radiator tubes, armored, hypervelocity impact damage characteristics	20509
Radie, Ivan, and family, relief	19541
Radicals, see Free radicals.	
Radiculitis, chronic, change in serum protein of patients during treatment with vibration baths, USSR study	14575
<b>Radio:</b>	
Poland, Warsaw Radio and Television Design Office, activities	12960
radiotechnical measurements, investigations, USSR studies	16036
regulations, partial revision, and additional protocol, text	10364
transmission, frequency-shift-keyer circuit improves PCM conversion	13195
utilization under national defense education act, news and reports	17928
Radio apparatus and equipment, Air Force Department procurement of AN/ARN 21 TACAN components, unnecessary costs incurred through failure to accept option offer, GAO report	6785
<b>Radio astronomy:</b>	
solar radio emission, velocity of corpuscular streams in solar corona based on observations	20624
star scintillation over Canada during July 20, 1963, eclipse	19153
transmission of information by extraterrestrial civilizations, USSR study	14648
Radio balance, see Radiation balance.	
Radio Beacon Ionospheric Satellite, see Satellites.	
<b>Radio broadcasting:</b>	
advertisements, prohibit FCC from making rules rel. length, etc.—	
hearings	2114
reports	2080, 4483
applications, FCC	3464
broadcast actions, reports	3464
editorializing, hearings	6363
emergency broadcast system (EBS) plan	8153
experimental, auxiliary, and special services, FCC rules and regulations	3989
fairness doctrine—	
applied to editorializing in broadcasts (address)	15887
current interpretation (address)	2309
more equitable distribution of facilities (remarks)	2312
occupations, employment outlook	7396
ratings, methodology, accuracy, and use, hearings	12142
services, FCC rules and regulations	3989, 10515
weather aids—	
Atlantic and Mediterranean area	20677
Pacific and Indian Oceans area	3075, 21818

	Entry
<b>Radio communication:</b>	
amateur radio service, FCC rules and regulations	3992, 6626
amateur stations on behalf of 3d parties, agreement with Columbia	7777
applications, FCC	3464
aviation, public safety, industrial, and land transportation services, FCC rules and regulations	3991, 8534
citizens radio service, FCC rules and regulations	3992, 6626
data from radiotelegraph carriers' reports	3817
domestic, public services, FCC rules and regulations	3993, 10516
equal time for nominees for President and Vice President, suspend for 1964, reports	12050
experimental services, FCC rules and regulations	3988, 6625
Geneva, regulations, etc., revision, ratification, etc., agreement with other governments	18967
industrial, scientific, and medical equipment, FCC rules and regulations	3988, 6625
international fixed public services, FCC rules and regulations	3993, 10516
lunar surface, study	20640
probability problem through layer E <sub>s</sub> , USSR study	20058
radiotelegraphy, USSR study	7276
safety and special radio services, FCC applications and actions	3464
space rockets, USSR study	16525
treaty matters, FCC rules and regulations	3988, 6625
<b>Radio direction finders, rawin set AN/GMD-2, evaluation of varactor diode parametric amplifier</b>	65
<b>Radio engineering:</b>	
USSR—	
metrology	19990
news of higher educational institutions	2509, 7021, 7398, 9209
recent developments	2019
translations from Izvestiya VUZov	14479, 20021, 21484
<b>Radio facility charts, see Maps and charts.</b>	
<b>Radio frequencies:</b>	
ablation materials, thermal performance and radiofrequency transmissivity	21749
allocations, FCC rules and regulations	3988, 6625
devices, FCC rules and regulations	6625
quarterly noise data	13274, 16740, 18806
<b>Radio frequency filters:</b>	
adjustable, general 1231-P5M, instrument calibration procedure, technical manual	13358
voltage tunable filter for F-band communication receivers	13337
<b>Radio frequency modulation:</b>	
pulse-frequency-modulation telemetry	5529
pulses, use of recirculation for compression, USSR study	5020
unidirectional, sensitivity	5463
<b>Radio in navigation:</b>	
aids—	
Atlantic and Mediterranean area	5579, 14993, 20675
Pacific and Indian Oceans area	7686, 14994, 20676

# INDEX 1964

	Entry		Entry
Radio operators:		Radio waves—Continued	
amateur, alien—		lunar radio emission, physical state	
authorize to operate in U.S. and		and nature of moon's surface—	14911
Costa Rica, agreement—	20843	lunar reflection circuit use in study	
authorize to operate in U.S. and		of ionospheric electron density	5609
Puerto Rico—		mode sum of LF, VLF, ELF terrestrial fields—	20639
hearing—	10323	propagation—	
law—	12008	calculations of field near apex of	
reports—	10225, 10267	wedge surface—	3051
commercial, FCC rules and regulations—	3987, 6624	east-west ionospheric paths, sunrise effects—	13629
radioman 3 & 2, Navy training course—	9680	journal of research, National Bureau of Standards—	3631, 13272
radiotelephone third class operator permit examination, study guide and reference material—	651, 19677	USSR studies—	20016
transmitter and receiver operator, examination announcement—	8157	real-time compensation for tropospheric radio refractive effects on range measurements—	20530
Radio Peking attacks on Soviet Union criticized, USSR—	1196	reflection from lossy magnetoplasma, numerical calculations—	1499
Radio physics, see Radiophysics.		scattering by turbulent inhomogeneities of troposphere, USSR study—	971
Radio propagation, see Radio waves.		superlong, propagation, USSR study—	20031
Radio pulse code modulation, PCM error correction and synchronization code—	14860	ultrashort, variability of refraction coefficient of atmosphere, aerological research, USSR—	2566
Radio receivers, see Receivers (radio).		VLF, calculated diffraction effects from localized ionospheric depression—	7580
Radio-release technique for measurement of moisture in gases, final report—	13705	see also Microwaves.	
Radio repairmen, employment outlook—	9436	Radioactivation analysis:	
Radio services, see Radio communications.		activation analysis—	
Radio signals:		radiochemical—	16741
attenuation due to plasma sheath on blunt-nosed cone—	3021	research studies—	10034
attenuation measurement vehicles, 4-stage systems, jet-pluming interference by computer simulation of measured flight motions, analysis—	3016	Radioactive isotopes, see Isotopes.	
device for continuous recording of signal to noise ratio, USSR study—	11147	Radioactive substances:	
intercept at sea and countermeasures, USSR study—	2481	artificial radioactive elements, chemical technology, principles—	7126
phase variations of 18 kc/s signals from NBA observed at—		incidents involving AEC, shipments, 1962 summary—	1778
Boulder, Colo.—	11436	luminous compounds, condition of cardiovascular system in workers with, problems—	6998
Frankfurt, Germany—	3052	protection of grain products from radioactive, chemical and bacterial substances discussed, USSR study—	14591
Maui, Hawaii—	9636	radiological emergency procedures for nonspecialist—	1786, 15291
Radio stations:		Radioactive substances:	
amateur, alien—		safe handling of materials—	9633
authorize to operate in U.S. and		safety in laboratory use, USSR studies—	18266
Costa Rica, agreement—	20543	transportation—	11855
authorize to operate in U.S. and		see also names of radioactive minerals, etc.	
Puerto Rico—		Radioactive waste disposal:	
hearing—	10323	decontamination of waste waters, USSR study—	20366
law—	12008	dispersion of dissolved or suspended materials in flowing streams—	4794
reports—	10225, 10267	low-level wastes, treatment, handling, disposal—	15290
employees, exemption from overtime pay under FLSA—	3187	processing, annotated bibliography of selected literature—	19244
maritime services on land, shipboard, etc., FCC rules and regulations—	3990	transport of radionuclides in fresh water systems, meeting report—	129
Radio-strontium, see Strontium isotopes.		Radioactivity:	
Radio telegraphy, see Radio communication.		aerial radiological measuring survey (ARMS)—	
Radio telephone:		Las Vegas area—	4292
cargo vessels in Hawaiian waters, permit, hearings—	10326	Norfolk-Peninsula area—	4293
FDM telephony transmission over SSB-PM satellite communication system, nonlinear noise analysis—	14892	alkaline leach milling processes—	5492
Radio waves:		atmosphere, nuclear meteorology problems—	8048
continuous-wave radar principles, USSR study—	6896	Camden-Delaware Valley area, ARMS-2—	111
diffraction and propagation, USSR studies—	20016, 21612		
ionospheric ducting investigation with ORBIS beacon—	5875		

# JANUARY-DECEMBER

	Entry
Radioactivity—Continued	
contamination of—	
external environment.....	10023
outer space, hygienic problems, USSR today.....	7060
seas and oceans, USSR study.....	18305
fallout—	
and winds.....	4373
damage to livestock in event of nuclear war.....	1734
defense against, USSR studies.....	5342
defense on farm.....	19068
deposition and washout computations based on generalized Gaussian plume model.....	117
effect on soils and plants, USSR study.....	9231
engineering method for calculating protection afforded by structures.....	14938
food chains, HASL contributions to study.....	15282
Health and Safety Laboratory program, quarterly summary reports.....	115, 5962, 11860, 15281
measurements in above-ground and below-ground structures.....	5957
monitoring equipment.....	18860
nuclear tests, general information.....	1787
planning dual-use military shelters.....	9902
protection against, USSR articles.....	4983
radiation standards and counter-measures, hearings.....	1986
revised estimates for 1964-65 and verification of 1963 predictions.....	19702
sampling, analysis, etc.....	10023
fallout shelters—	
aboveground clay brick masonry core-type, design.....	6071
architectural & engineering development program, highlights.....	15345
architectural, engineering and consulting firms with certified analysts, directory.....	6065
bunker-type for beef cattle, farm building plan.....	4214
for 6 people.....	1710
industrial architecture.....	4372
management plan.....	6072
medical care manual.....	6068
potato storage, farm building plan.....	4215
program of Defense Dept.....	21046
qualified analysts, directory.....	17127
shielding, shelter, design and analysis, equivalent building method.....	21048
signs, posting instructions, handbook.....	8151, 13793
fission products of cystoselra in Black Sea, variation in content, USSR study.....	5028
in Sputnik 4 fragment.....	16997
iodine-137 in bovine thyroids, measurement.....	7697
natural radioactivity of soils.....	9186
protecting rural population against radioactive contamination, USSR pamphlet.....	21517
protection—	
general correlative studies, operation Bren.....	4294
shelter design and analysis.....	15344
charts, changes.....	11930
radioactivity and migrations of certain marine animals, USSR studies.....	7061
radiochemical and physical measurements of debris from underground nuclear detonations.....	5981
radium in water, determination.....	14349

	Entry
Radioactivity—Continued	
recommendations of International Commission on Radiological Units and Measurements (1962).....	3043
addendum.....	5544
technique for measurement of moisture in gases.....	13705
telemetering of radioactive radiations, USSR study.....	18403
see also Radiosensitivity.	
Radioassay of thin-layer chromatograms, blueprints for zonal scraper.....	11864
Radiobiologiya (periodical): translations.....	5950-51, 8046, 11851
Radiobiology:	
natural radiomimetic effect on biological objects, etc., USSR study.....	7283
research, USSR articles.....	21443
semi-annual progress report, July 1-Dec. 31, 1963.....	19242
USSR periodical, translation.....	1767, 5950-51, 8046, 11851
USSR prospects for development.....	1122
Radiocarbon, see Carbon isotopes.	
Radiochemical analysis:	
activation analysis, instrumentation, radiation and radioisotope techniques.....	16741
radiochemical analysis of water (series).....	14349
Radiochemical laboratories, see Radiation laboratories.	
Radiochemistry:	
electrophilic additives effect on radiolytic products of organic chain reactions.....	10033
ozone formation in radiolysis of oxygen.....	5965
principles.....	8050
studies of the sea, USSR.....	18269
techniques, application in food processing research for removal of pesticide residues from foods.....	19243
Radiodiagnosis, Soviet, survey of published literature, 1959-63.....	7093
Radioelectronics:	
and adjacent sciences, USSR study.....	10745
in space medicine, USSR study.....	18384
Radiography:	
testing requirements for solid propellants, military standard.....	563
use in inspection of thick polyethylene sections.....	13369
Radioisotopes, see Isotopes.	
Radiological emergency procedures for non-specialist.....	1786, 15291
Radiological health, see Health.	
Radiological monitoring, see Radiation monitoring.	
Radiological Research Laboratory, Columbia University, annual report on research project.....	13700
Radiological telemetering system, radioactive radiations, USSR study.....	18403
Radiological Units and Measurements, International Commission, see International Commission on Radiological Units and Measurements.	
Radiological warfare:	
protecting food and water against chemical - biological - radiological attack, USSR study.....	14535
USSR, individual means of protection against chemicals and radiation.....	20103



# INDEX 1964

	Entry		Entry
<b>Radiology:</b>		<b>Radon hydrotherapy, see Hydro-</b>	
groups, work at sanitation and epi-		therapy.	
demiological control station,		Radosavijevic, Mihailo, relief.....	10379, 15447, 17201
USSR.....	9089		
lower Columbia River in Oregon,		Radwan, M. A., protecting forest trees	
radiological survey, Jan. 1962- July 1963.....	21855	and their seed from wild mam-	
radiological mechanisms for geo-		mals.....	8684
physical research, annual re-		Rafts, see Life rafts.	
port.....	19240	Ragle, Richard H., formation of lake	
Soviet research.....	1336	ice in temperate climate.....	8507
Soviet studies.....	1305	Ragsdale, Robert G.: correlation of turbulent air-bromine	
see also Medical radiology.		coaxial-flow experiment.....	7524
Radiolysis, see Radiochemistry.		radiant heat transfer in coaxial	
Radiomen, see Radio operators.		flow gaseous reactor.....	7525
radiometer-pyrometer for analysis		Railroad accidents: of gaseous combustion prod-	
ucts.....	16710	accident bulletins.....	4877-80, 14399
superheterodyne receiver, tech-		all line-haul and switching and	
niques.....	7468	terminal companies, summary.....	4065
TIROS low resolution, characteris-		investigation reports.....	875-879, 6867-72, 8842-43, 10716-717, 12570-572, 14406, 15992, 18191, 19830, 21379
tics.....	20569	rail-highway grade crossing ac-	
Radiomimetic agents, natural, effect		cidents, errata.....	14402
on biological objects, etc., USSR study.....	7283	reported, preliminary summary.....	3208
Radionuclides: analysis of gamma-ray spectra by		monthly.....	14399
stepwise multiple regression.....	9713	Railroad Adjustment Board, see Na-	
environmental surveillance labora-		tional Railroad Adjustment	
tory for analyses.....	21847	Board.	
radium in water, determination.....	14349	Railroad cars: equipment of class 1 railroads.....	3757
transport by streams (series).....	4794	loading boxcars at country elevators	
transport in fresh water systems, report.....	129	in hard winter wheat areas.....	19088
USSR— news of higher educational institu-		see also Dining cars—Freight cars— Passenger cars.	
tions.....	1123, 5236, 7212, 8863	Railroad employees: Alaska Railroad, relief.....	15639, 17488
translations from Iavestiya VUZov.....	12590, 14509, 21440	employment outlook.....	9451
Radioprotective agents: AET-cysteine, in rhesus monkey.....	19179	retired, spouses to receive annuities	
chemical protectors, Japanese study.....	16311	without reduction for social se-	
gases, action, USSR studies.....	16381	curity benefits earned.....	19606
mercamine, radioprotective action		reports.....	17583, 17611
on radiosensitivity of rats, ef-		retirement act, questions and an-	
fectiveness, USSR study.....	14471	swers.....	3118
Radiosensitivity: birds, USSR study.....	6945	retirement and unemployment in-	
cytological analysis of sensitivity of		surance act— RRB administrative rulings.....	15074
tissues of mammals, USSR study.....	5092	text as amended, 1963.....	11591
mammalia, inherited structures of		retirement and unemployment in-	
cells in vitro, USSR study.....	5033	surance systems amendments, 1963.....	1589
of animals and hybrids, USSR study.....	12760	wage statistics, class 1.....	4135
stress of rats, effectiveness of radio-		Railroad retirement acts, see Railroad	
protective action of mercamine, USSR study.....	14471	employees.	
wheat plant progeny, influenced by		Railroad Retirement Board: appropriations, 1965—	
gamma irradiation of parent seed, USSR study.....	9008	hearings.....	8361, 17864
Radiosondes: code, manual.....	3188	law.....	19413
amendment.....	11690	reports.....	8343, 17623, 17778
observations, manual.....	13516	monthly review.....	3746
Radiotelephone, see Radio telephone.		report, 1963— departmental edition.....	11592
Radiotelephone operators, see Radio		document edition.....	10184
operators.		rulings in administration of Rail-	
Radium: cases, survival experience.....	13701	road retirement act and Rail-	
determination in water.....	14349	road unemployment insurance	
dial painters, N.J., epidemiological		act, legal opinions.....	15074
follow-up.....	19236	Railroad Safety Section, report, 1963.....	2464
New Jersey cases, epidemiological		Railroad supplies: Federal item identification guides	
follow-up— current data.....	11862	for supply cataloging.....	12289
progress report.....	11863	supplements.....	3470
paint on watch and clock dials, health hazards.....	18901	Railroads: automatic data processing procedure	
Radomski, Alexander L., family in-		of rail form A, 11-63 using IBM 7090, textual explana-	
come and related characteris-		tion.....	14403
tics among low-income counties and States.....	21926	carload cost scales by territories, 1962.....	8841

# JANUARY-DECEMBER

	Entry		Entry
<b>Railroads—Continued</b>		<b>Rain—Continued</b>	
carload unit costs by territories, 1962	12569	formation in warm clouds, statistical theory of microphysical mechanisms, Chinese study	945
carriers, emergency board report, class 1—	10478	gages, trough-type, evaluation	14322
freight commodity statistics—		infiltration measurement of simulated rainfall by hand portable infiltrometer	8761
annual report 1962	8839	interception by hardwood forest litter in southern Appalachians	14332
quarterly	3537	temperature and rainfall as they affect corn earworm damage to dent corn	20896
freight train performance	3538	<i>see also</i> Precipitation	
fuel and power statistics	3544	Rain making, <i>see</i> Weather control	
income and balance-sheet items	4024	Rainbow Valley, ground-water conditions in area	4814
line-haul, value of property used in common carrier service	4875	Raincoats, apparel survey, current industrial reports	8112
motive power and car equipment	3757	Rainfall, <i>see</i> Rain	
operating revenues and expense	3819	Rainier, Mount, morphology and hydrology of glacial stream	4791
passenger traffic statistics	3837	Rakich, John V., supersonic flows of perfect gas over bodies of revolution at small angles of yaw	16702
passenger train performance	3838	Raleigh, Henry D., systems for nuclear auxiliary power (SNAP), literature search	17061
revenue traffic statistics	3980	Raleigh, N.C., occupational wage survey	2963, 21672
train and yard service	15994	Ram B vehicles, <i>see</i> Spacecraft	
yard service performance	4170	Ramage, W. Va., railway accident	877
Communist China, passenger timetable	1217	Ramaley, David, modifications in methods of calibration of universal ratio sets	18808
cost finding procedures and principles, explanation	873	Rambosek, Albert J., stress field within core stub in borehole	11344
emergency board report	19644	Ramelb, Benjamin A., relief	6439, 21170
engineered performance standards, track maintenance—		Ramey, James T.: remarks—	
formulas	1670	Nov. 13, 1963	135
handbook	1671	Apr. 20, 1964	10039
interstate hauling, California-Arizona fresh fruits and vegetables	16059	Oct. 9, 1964	19264
large—		Ramps, C-130 aircraft ramp unloading kit	5883
operating revenues and expenses	3820	Rampy, John M., determination of stability derivatives from flight test data by means of high speed repetitive operation analog matching	11786
operating statistics	3821	Ramsey, John L., logical techniques for glottal source measurements	19159
lessons and proprietary companies, transport statistics	880, 6874	Rana temporaria, <i>see</i> Frogs	
private car lines, transport statistics, 1962	4881	Ranch, L. M., algebraic structure of N-body problem	20532
railway labor act, amend—		Randall, Allan D., geology and ground water in Farmington-Granby area, Conn.	10654
law	17401	Randall, Kenneth A., nomination, hearing	6497
reports	2062, 17732	Randle, Claire, legislative history of equal pay act of 1963	10308
railway operating rules, technical manual	13684	Randolph, A. Philip, salute to a great leader (remarks)	13380
remote control in railroad operations, USSR studies	18465	Random processes, <i>see</i> Probabilities (mathematics)	
revenue contribution, distribution, rights-of-way, pay value of improvements of lessees, Red Rock Reservoir construction	17235, 17798	Range and range rate system and data analysis for Syncom I (1963 4A)	13217
train communications systems, statistics	2465	Range lands: administered by Forest Service, court cases related to administration	15935
trains, compilation of plan for forming on electronic digital computers, USSR	12078	allotment analysis and management planning, story of survey on national forests and grasslands	13596
USSR—		California, annual-type vegetation, changes	8663
automation	2791	research methods, symposium	4212
building projects price lists	6969	western range and livestock report, monthly	4155
transportation developments	2856, 8846		
<i>see also</i> Railroad employees.			
<b>Railroads, Commissioner of, <i>see</i> Commissioner of Railroads.</b>			
<b>Rails, hot-rolled rail steel bars, produced from tee-section rails, standard of trade</b>	5540		
<b>Rails (birds):</b>			
hunting, possession, transportation, importation, Federal regulations, 1964-65	15925, 19734		
<b>Railway cars, <i>see</i> Freight cars—Railroads</b>			
<b>Railway Employees' Department, AFL-CIO, emergency board report</b>	19644		
<b>Railway equipment, <i>see</i> Railroad supplies.</b>			
<b>Railway Express Agency, Inc., transportation statistics, 1962</b>	880		
<b>Railway labor act, <i>see</i> Railroads.</b>			
<b>Railways, <i>see</i> Railroads.</b>			
<b>Rain:</b>			
calendar/cities, search	13628		

# INDEX 1964

	Entry		Entry
Ranger, <i>see</i> Spacecraft.		Rats—Continued	
Rank order, ordinal ranking accuracy, effect of sorting procedure on cards	7994	microsome oxidase and reductase activity in livers of young rats, influence of X-irradiation on development	13651
Rankin, John Elliott, Memorial Veterans Hospital, <i>see</i> John Elliott Rankin Memorial Veterans Hospital.		radiosensitivity, effectiveness of radioprotective action of mercalmine, USSR study	14471
Rankin, Robert H., Coast Guard aviation	6114	white—	
Rantz, S. E.: snowmelt hydrology of Sierra Nevada stream	6826	adapted to hypoxia, effect of adrenalectomy on resistance to radial acceleration, USSR study	16279
stream hydrology related to optimum discharge for king salmon spawning in northern California Coast Ranges	14357	nervous system, detection of labelled ribonucleic acid, USSR study	18345
surface-water hydrology of coastal basins of northern California	12526	Rau, Weldon W., Foraminifera from northern Olympic Peninsula, Wash.	8766
Raper, James L., description and flight performance of Ram B vehicle	18765	Rauch, L. M., regularized explicit solution of analytic N-body problem	21735
Rapid transit, <i>see</i> Local transit.		Raup, Ruth M., medical groups in United States, 1959	5658
Rappahannock River: tidalwater portion, hurricane survey, engineer report	17957	Raw materials: United States, economy, 1900-61	6052
departmental edition	17469	announcement and order form	8103
Rare earths:		Rawlin sets, <i>see</i> Radio direction finders.	
alloying characteristics with transition elements	19233	Rawls, Nancy V., foreign trade regulations of Liberia	18185
alloys, USSR book	8049	Ray, H. D., measuring wool by staple length recorder	13590
effects on electrorefined vanadium elements, production and properties, USSR studies	20406	Ray, Robert S., unemployment rates in larger cities	15255
influence on high-temperature nickel-base alloys, USSR study	1149	Rayburn, Sam, Memorial Veterans Center, <i>see</i> Sam Rayburn Memorial Veterans Center.	
metals, separation, etc., in zirconium alloys	11336	Rayleigh process, <i>see</i> Probabilities (mathematics).	
minerals and metals, minerals yearbook chapter	18679	Rayleigh scattering, <i>see</i> Scattering. Rayleigh waves, <i>see</i> Seismology.	
separation of lanthanide series and yttrium using phosphonic and iminodiacetic acid resins	18693	Raymond, Allan E., effect of evaporation and powdering processes on iodine-131 content of milk.	20747
sulfates, napthenic acid solvent extraction	9513	Rayner, A. C., Coastal Engineering Research Center, summary of capabilities	12338
<i>see also</i> names of rare earths.		RE-TR series	7661
Rare metals, <i>see</i> Metals.		REA, <i>see</i> Rural Electrification Administration.	
Rarefied gases, <i>see</i> Gases.		REA bulletins	3122-23, 5676, 7721, 9751-52, 18933
Rasmussen, Maurice L., pitching, etc., motion of spinning symmetric missile	9575	Reaction kinetics, <i>see</i> Kinetics.	
Rasor, Robert W. and wife, relief	6440, 8212	Reactor fuel, <i>see</i> Reactor fuels.	
Raspberries, growing, general information	11756	Reactor fuel elements:	
Ratajczak, Rosa S., relief	15432, 17678	automatic enrichment differentiator (FEED) based on gamma-ray spectrometry	5969
Rates, <i>see</i> Air carriers—Electricity—Fire insurance—Freight rates.		superheated sheaths, relative performance of alloys	10030
Rathert, George A., minimum crew space habitability for lunar mission	7505	Reactor fuel rods:	
Ratings:		fabrication with stainless-steel-lined zircaloy-2, design	13695
Navy training publications for advancement, bibliography	11488	single, burnout conditions in annular geometry, water at 600 to 1400 psia	5960
peer, stability in changing groups	13686	UO <sub>2</sub> fuel systems for water reactor applications, development and testing	6956
Rations, <i>see</i> Food for livestock.		Reactor fuels:	
Rats:		ceramic, irradiation testing, summary report	8051
brain and muscle tissue, effect of fractional X-ray irradiation on activity of hexokinase and aldolase, USSR study	16308	ceramic materials, effect of nuclear radiation	5982
cold exposed—		chemical reprocessing plant, hearing	6188
and control, cell proliferation in adrenal	4247	EURATOM management program—cycle analysis	5977
metabolic studies of amino acid imbalance	4249	physics analysis	5976
diet as factor in length of life, etc.	19080	synthesis of results	8064
effects of variations in carbohydrate, protein and fat intake on characteristics of growth	9976	fabrication processes used in high power density program, economic comparison	8055
gravitational acceleration, plasma nonesterified fatty acids concentration	16729		

# JANUARY-DECEMBER

Entry	Entry
	Reactor fuels—Continued
	fast, mobile blankets design and economic evaluation..... 19230
3651	fuel management symposium, report..... 1776
4471	graphite-matrix fuels development for AVR, final report..... 13693
	irradiated fission, reprocessing, annotated bibliography, supplement..... 19245
	mixed PuO <sub>2</sub> -UO <sub>2</sub> fuel, fabrication cost estimate..... 8053
6279	processing, review of recent developments..... 3960
8345	selected measurement methods for plutonium and uranium in nuclear fuel cycle..... 4303
	change..... 19249
8766	stainless steel clad swaged powder fuel assembly, failure..... 10031
11735	strontium-titanate production radioisotope fuel for SNAP 7B thermoelectric generator..... 5968
5658	uranium carbide, development..... 21018
6052	Reactor safety, see Safety of life.
8103	Reactors, bomb, reducing vanadium compounds..... 7451
	Reactors (atomic):
	AEC development program, hearings..... 8235
18185	boiling water, methods for improving critical heat flux..... 10029
3590	BONUS boiling nuclear superheater power station, final summary design report..... 13707
5255	built, being built, or planned in United States..... 8082
	Bulgarian atomic reactor information..... 9154
	burnout conditions for single rod in annular geometry, water at 600 to 1400 psia..... 5960
	Carolinas Virginia tube reactor, large plant study..... 112
20747	classification bulletin, nuclear reactions and systems..... 0691
12338	coaxial-flow gaseous, 2-dimensional gray-gas radiant heat transfer..... 7525
7661	containment, bibliography..... 5973
	containment-vessel leakage rates measuring, comparison of absolute-and-reference-system methods..... 20573
5676	control augmentation critical experiments..... 10026
18933	coolants, reclamation, catalytic hydrocracking of polyphenyl systems..... 8059
5969	cooling, biphenyl liquid heat transfer and vapor deposition studies..... 10032
10030	design study of fluid engine power systems..... 5978
13695	digital computer program for EGCR temperature and neutron transient analysis, ETNATA..... 15280
5960	engineering materials list..... 21017
	experimental, decontamination of waste waters, USSR study..... 20366
5956	fast—
	ceramic reactor, 565 MWe, conceptual design..... 114
8051	fixed blankets, design and economic evaluation..... 10025
5982	mobile blankets design and economic evaluation..... 19230
6188	Federal item identification guides for supply cataloging..... 12292
5977	supplements..... 3473
5976	fuel management symposium..... 1776
8064	gas cooled—
	axial temperature and pressure distribution in EGCR development of PTD-1 program..... 11857
8055	

Entry	Entry
	Reactors (atomic)—Continued
	gas cooled—continued
	experimental, radiological health manual..... 13691
	FATT, transient temperature computer program for EGCR core..... 11858
	rotating machinery application, proceedings of meeting..... 13715
	graphite-matrix fuels development for AVR, final report..... 13693
	Hanford project of Atomic Energy Commission, exchange of public domain lands heretofore withdrawn and reserved, authorize—
	law..... 17415
	reports..... 15576, 17774
	heavy water lattice project annual report..... 19234
	heterogeneous, calculation methods, test and verification..... 19237
	high power density development project interim report 300 MWe HPD conceptual design study..... 113
	hydrogen and helium flowing in tube, heat transfer and friction data at surface temperatures up to 5600° R..... 11407
	kinetics and control, symposium..... 13714
	laminar heat transfer in thin rectangular channels, etc..... 16716
	low-pressure steam reactor review group, report..... 15289
	maritime nuclear steam generator 630A, status report..... 8056
	materials, review of recent developments..... 3961
	nuclear chemistry, proceedings of 6th conference..... 128
	nuclear reactor, thermal operating performance..... 8076
	nuclear superheat project, quarterly reports..... 4295-96
	organic cooled heavy water, triplicate meeting, June 11-13, 1962..... 127
	photography, operational documentary, manual..... 8058
	Plum Brook, two-dimensional flux and criticality calculations..... 21767
	power—
	AEC development programs..... 1788
	annotated bibliography of selected literature..... 19246
	cooperative demonstration program, 1963, hearings..... 8236
	in small packages..... 15293
	nuclear performance of cores, ANS topical meeting..... 8077
	operating history..... 15288
	technology, review of recent developments..... 3861
	pressurized water cooled systems, tentative structural design..... 7814
	radioactive isotopes, preparation in 1st Hungarian experimental nuclear reactor..... 2753
	safeguards, application to United States facilities, agreement with International Atomic Energy Agency..... 18984
	safety, literature search..... 15284
	shielding physics, USSR studies..... 16145
	SL-1 excursion, final report..... 1771
	sodium cooled—
	fast ceramic reactor development program, quarterly, report, Oct.-Dec. 1961..... 5959
	mass transfer, test loop design..... 5958
	30 megawatt heat exchanger and steam generator, chemical and stress analysis..... 5955



# INDEX 1964

	Entry		Entry
Reactors (atomic)—Continued		Real estate—Continued	
steels, neutron embrittlement.....	5613	reacquisitions of real property, limit	
subcritical assemblies, compilation		amount of gain and prevent	
of references.....	1772	deduction for bad debts—	
technology, strain-cycle phenom- ena in thin-wall tubing.....	19232	law.....	17428
test reactor operating and safety		reports.....	15784, 17614
experience, study.....	5963	transferred by RFC to other depart- ments, payments in lieu of	
thin rectangular cooling passages, use of single total- and static- pressure probes to measure flow rate.....	21769	taxes, extend period—	
UO <sub>2</sub> fuel systems for water reactor		law.....	13880
applications, development and testing.....	5956	reports.....	12055, 17704
VBWR stability test report.....	13694	see also Mortgages.	
water-cooled thermionic nuclear		Real property, see Real estate.	
power plant, feasibility study.....	5967	Reanimation, see Revivication.	
Read, Charles B., upper Paleozoic		Reapportionment:	
floral zones and floral provinces		legislatures, amend Constitution of	
of U.S.....	8771	United States to guarantee	
Read, Ralph A., tree windbreaks		State's right to apportion one	
for central Great Plains.....	5815	house on factors other than	
Reading:		population, report.....	19460
how children learn to read.....	21266	State legislative bodies, temporary	
instruction in Armed Forces, USAFI manual—		stay of proceedings, report.....	15769
stories worth knowing, textbook.....	554	Recall (psychology):	
teaching guide.....	556	short-term, effect of various modes	
workbook, know your English.....	555	of rehearsal.....	20705
readiness, research.....	600	Receipts and classes of post offices.....	1541
research, middle grades, bibli- ography.....	599	Receipts and expenditures, see Fi- nance.	
teachers, advanced study, national		Receivers (radio):	
defense institutes, manual.....	21267	home type and automobile, current	
teaching young children to read.....	10474	industrial reports.....	17094
unreadiness in the underprivileged.....	6577	home-type radios, Federal item	
Reading Company, accident.....	878	identification guides for supply	
Reading machines, for data process- ing, employment effects.....	2943	cataloging.....	12296
Real estate:		supplements.....	3477
acquisition practices and adequacy		P-band communication, voltage	
of compensation in Federal and		tunable filter.....	13337
federally assisted programs, hearings.....	14016, 15602-603	superheterodyne, above 100 giga- cycles, techniques.....	7468
agents and brokers, employment		see also Transceivers (radio).	
outlook.....	7381	Receiving clerks, occupations, em- ployment outlook.....	7382
bibliography.....	20788	Recipes:	
conveyance to Waukegan Port Dis- trict, Ill.—		apples in appealing ways.....	11763
hearings.....	2123	breads (batters), cereals, and paste	
law.....	1952	products.....	13682
report.....	464	bulgur wheat.....	16934
District of Columbia horizontal		canned beef in family meals.....	7885
property act—		corn grits—	
hearings.....	4578, 8373	for schools and institutions.....	5793
law.....	1947	in family meals.....	7883
report.....	484	green vegetables.....	11759
District of Columbia, horizontal		outdoor fish cookery.....	17997
property act, amend—		peanut and peanut butter.....	11758
law.....	17334	sweetpotato.....	4205
reports.....	15496, 21232	tomatoes on your table.....	20924
industry, employer expenditures		Recirculation of lymphocytes.....	19141
for selected supplementary re- muneration practices.....	21670A	Recirculator with quantisation.....	5915
leased to U.S. throughout world, 1963.....	8748	Reclamation accounts to you.....	9748
leases by Post Office Dept., extend		Reclamation Bureau:	
authority—		annual report, 1963.....	9740
hearing.....	8393	appropriations, 1964, public works, hearings.....	519
law.....	17339	appropriations, 1965—	
reports.....	10215, 12212	amendment.....	12030
living units, minimum property		hearings.....	12119, 15797
standards.....	659, 8548, 17979	reports.....	12098, 15767
loans by national banks, amend		earth manual.....	5672
Federal reserve act as to		engineering laboratories.....	9742
limitations, hearings.....	6346	financial condition and operations, fiscal year 1963, summary re- port.....	9748
multifamily housing, minimum		library accessions, list.....	4025
property standards.....	17978, 19686	operation and maintenance equip- ment and procedures release.....	3822
national bank loans limitations, increase percentage hearings.....	15802	press releases.....	3921
owned by U.S. throughout world, 1963.....	6794	program, recreational opportuni- ties.....	15076
		project feasibility and authoriza- tions, supplement.....	7717
		publications available for sale, list.....	5673, 15075
		research report.....	9749
		special studies, delivery of water to Mexico.....	15077

	Entry
Reclamation Bureau—Continued reclamation era, quarterly periodical	3964
Reclamation of land: compensation in connection with reclamation projects—	17419
law	359, 17825
reports	16850
Federal projects, statistical appendix to 1963 crop report	4525
Grand Valley Water Users' Association, repayment contract, modify, report	17276
Nevada, repeal Pittman act authorizing grants—	15738
law	7717
report	7718
projects, feasibility and authorizations, supplement	14650
questions and answers	17669
USSR, discussion of problems at February plenum of Central Committee, CPSU	17706
water supply contracts, repayment compilation	see also names of projects.
print as Senate document, report	Reclamation projects, see Reclamation of land—also names of projects.
see also names of projects.	Recombination reactions, volume recombination of cesium ions, final report
Reclamation projects, see Reclamation of land—also names of projects.	5725
Recombination reactions, volume recombination of cesium ions, final report	Reconnaissance (geologic):
Reconnaissance (geologic):	Antelope-Ashwood area, north-central Oregon
Antelope-Ashwood area, north-central Oregon	4778
uranium in Perus area, Sao Paulo, Brazil	17058
water supplies, Cordova, Alaska	827
Reconstruction Finance Corporation:	
real property transferred to other departments, payments in lieu of taxes, extend period—	13880
law	12055, 17704
reports	12055, 17704
Record players, see Phonographs.	
Recording instruments:	
cockpit voice recorders, installation, civil air regulations amendments	14222
Ladoga precision depth recorder, use in marine research, USSR study	10937
small digital recording head has parallel bit channels, etc.	13175
wind-movement recorder, how to make from spare drum-type recorder	21327
Records:	
accident, provide statistics of results, and give direction to safety effort (remarks)	13035
case recording in rehabilitation	20874
criminological investigation of documents, USSR study	21407
divorce, where to write	11587
employers, kept under fair labor standards act—	
general requirements	5750, 16915
miscellaneous exemptions, etc.	5751
genealogical records in National Archives, guide	14931
Government departments, etc., disposition, reports	339, 2043, 4463, 4481, 6294, 8293, 8333, 10207, 10214, 12051, 12074, 13931, 15488, 15499, 17593, 17620, 19462.
management handbook	13266
managing noncurrent files, Federal records centers	7572

	Entry
Records—Continued	
papers in Library of Congress, register—	
Culbertson, William S.	5458
Olmsted, Frederick L.	1390
public, retention requirements, guide	6684
records and credit in profitable management, course program	20782
Senate, papers relating to presidential nominations, 1789-1901	21781
tools for safety action, using to reduce accidents (remarks)	14679
transferred, certification of facts by GSA administrator—	
law	6176
report	4548
your personal affairs, keep with your important papers	2257
see also Military records—Paperwork (office practice)—also names of departments, etc.—also subjects.	
Recovery of lunar vehicles—geometric constraints on trajectories	5881
Recreation:	
benefits for defense contractor employees, cost aspects	21200
hearings	17632
central Rocky Mountains, forest campgrounds, summer recreational use	12480
changing social trends and recreation planning (address)	11711
civil works projects, general information	625, 19659
consumer information, price list	21842
equipment, Federal item identification guides for supply cataloging	12206
supplements	3477
land and water conservation fund, establish—	
hearing	15809
law	17436
reports	341, 12064, 17619, 17713
land and water conservation fund proposal (remarks)	7666
national forest areas, relationship between visitor characteristics and recreation activities	785
national forests—	
Idaho	12437
Nevada	12438
Utah	12439
Wyoming	12440
national organizations directory	16789
Northern Great Lakes region	15221
outdoor—	
Agriculture Dept. programs for farm enterprises (address)	5806
clip sheet	3085
current periodicals	19818
Federal assistance available to States, their subdivisions, etc.	9689
Federal focal point	20714
general policy guidelines	15031
land and water conservation fund act as landmark in legislation (remarks)	18870
outdoor recreation and demands (remarks)	9690
outdoor recreation for America, reports of Outdoor Recreation Resources Review Commission, list and order form	3092
parks for America	18831
race for inner space, special report to the Nation	8796
skiing in national forests, America's playgrounds	39
State statistics, 1962	7607
time is now (remarks)	7666

# INDEX 1964

Entry	Entry
Recreation—Continued	Red flag (Chinese periodical) : translations 1131
outdoor—continued	2545, 4974, 5217, 5389, 8925,
water pollution and public health	8957, 10912, 11165, 12646,
aspects, policy 15032	12885, 14436, 14481, 16188,
place in agriculture (address) 5855	16302, 18290, 18301, 18314,
REA loan policy, hearing 387	18451, 19844, 19991, 20138,
reclamation's program for recrea- tional opportunities 15076	20199, 21630, 21383.
rural—	Red Lake Band of Chippewa Indians, see Chippewa Indians.
conservation and development projects, role of Agriculture Department (address) 16942	Red Mountain formation, relation be- tween specific gravity and iron content of rocks 4781
New England enterprises, invest- ments, returns, problems 17901	Red oak, see Oak.
residential recreation subdivi- sions serving Washington, D.C. area, 1963 15835	Red pine, see Pine.
Sanford Reservoir area, public fa- cilities, construct, operate, and maintain—	Red Poll cattle, see Cattle.
law 17395	Red River Valley, potatoes, vine kill- ing in relation to maturity 15223
reports 332, 17779	Red Rock Reservoir, railroad rights- of-way, pay value of improve- ments of lessees 17235, 17798
small watershed projects, rural areas development program 5853	Red Sea : lights and fog signals, list 9674, 16779, 21813
vacation farm business, planning helps 5848	sailing directions, change 11477
water-resource projects, uniform policies and cost allocation—	Red-tailed gerbils, see Gerbils.
hearings 6361	Red tide, counts of organisms, Gym- nodinium breve, and associated oceanographic data from Flori- da west coast, 1960-61 4745
report 6304	Redden, James F., Lingala, basic course 1601
see also Boating.	Redevelopment (city planning, etc.) : accelerated public works program, maximum grants-in-aid 88, 11818
Recreation Advisory Council, circula- rs 15030-33	AID missions, bibliography 18156
Recreational areas and demonstration projects:	Alexander and Pulaski Counties, Ill., suggestions for more ef- fective development program 13660
national areas, selection, etc., pol- icy governing 15030	ARA economic and social research program 13664
proposed Whiskeytown-Shasta-Trini- ty national recreation area, report 1535	area analysis and economic devel- opment, ARA experience (ad- dress) 8013
Quetico-Superior area, recreational use 12476	area designation status report 1754
Welfare Administration, demonstra- tion projects in public assist- ance 15165	area redevelopment— and better communities (ad- dress) 5926
Recruiting and enlistment:	approved projects, directory, Area Redevelopment Admin- istration 5925
Army enlistment screening test— feasibility of abbreviated forms— methods for improving enlisted input 15275	bookshelf of community aids 1755, 13662, 15256
simulated branching tests, pre- liminary evaluation 15274	Bristol-Plymouth, Conn., opportu- nities for economic develop- ment 11821
Army recruiting & career counsel- ing journal 3965	Butler County, Ala., opportuni- ties for economic growth 17022
enlistment in Reserve components of Armed Forces, amend U.S. Code—	Cambridge, Ohio, opportunities for economic growth 11822
law 1965	contracting mining communities, U.S. experience (paper) 8015
reports 329, 2211	disposable cup industry, pertinent characteristics 11825
enlistment of aliens in Reserve com- ponents of Armed Forces, amend U.S. Code, hearing 6496	Douglas County, Wis., opportuni- ties for economic growth 15251
Philippine nationals enlistment in U.S. Navy and Coast Guard, inquiry 2115	Early County, Ga., opportunities for economic growth 20979
Regular and Reserve Forces, un- necessary costs incurred in en- listment and discharge of un- qualified applicants, GAO re- port 6787	economic growth in American communities 5927
Recrystallization:	employment opportunities re- stricted to individuals having funds to invest in business venture, GAO report 21333, 9994
vanadium 21716	in action 9994
zone method of obtaining high- purity aluminum, investiga- tion, USSR study 11079	industries, big city, characteris- tics 13661
Rectal temperature of working sled dog 4250	iron ore problems, ARA techni- cal assistance 11826
Rectifiers, high voltage silicon con- trolled, research and develop- ment 13439	Kalkaska County, Mich., opportu- nities for economic develop- ment 15252
Red cedar, see Cedar.	Lowell, Mass., opportunities for economic development 19196
Red clover, growing 20926	
Red Dane cattle, see Cattle.	
Red fir, see Fir.	

# JANUARY-DECEMBER

	Entry		Entry
Redevelopment (city planning, etc.)—		Redevelopment (city planning, etc.)—	
Continued		Continued	
area redevelopment—continued		overall economic development pro-	
manpower reports—		grams, guidebook for redevel-	
Altoona, Pa.-----	21275	opment area organizations-----	13662
Atlantic City, N.J.-----	17931	planned-unit development with	
Charleston, W. Va.-----	17932	homes associations-----	6636, 19685
Duluth, Minn.-----	12332	redevelopment (periodical)-----	5930
Fall River, Mass.-R.I.-----	12333	relocation of families from urban	
Johnstown, Pa.-----	17933	renewal areas, inadequate poli-	
Mayaguez, P.R.-----	17934	cies and practices, District	
Superior, Wis.-----	12332	of Columbia Redevelopment	
Wheeling, W. Va.-Ohio-----	17935	Land Agency and HHFA,	
Marion County, Ga., opportu-		GAO report-----	19756
nities for economic growth-----	15253	Russell County, Va., suggested	
Marquette County, Mich., oppor-		development opportunities-----	13650
tunities for economic growth-----	17023	tourist industry and redevelopment	
middle Kentucky River Valley		areas, statement-----	15257
area, Ky., Breathitt, Lee,		urban planning assistance pro-	
Owsley, and Wolfe Counties-----	19197	gram-----	
Muskogee, Okla., opportunities		project directories-----	3183, 9865, 16904
for economic improvement-----	13658	report-----	3971
Reynolds and Wayne Counties,		urban renewal-----	
Mo., opportunities for economic		directory-----	4125
growth-----	13657	District of Columbia, hearings-----	6349,
Scioto County, Ohio-----	15254	8376, 19501	
3 years in review, interim report		Federal assistance for community	
of National Public Advisory		renewal programs-----	1647
Committee on Area Redevel-		Hyde Park-Kenwood area re-	
opment-----	15369	habilitation, Chicago, Ill., in-	
Washington, Mo., opportunities		effective administration,	
for economic growth-----	11823	HHFA, GAO report-----	19757
Weston, W. Va., development		manual-----	4126
opportunities-----	15250	notes-----	4127
area redevelopment act, 1963		operations under title 1, housing	
amendments-----	15563	act of 1949, report-----	3972
summary-----	2234	program, hearings-----	3983
Area Redevelopment Administra-		project characteristics, 1963-----	15142
tion, technical assistance,		rehabilitation, minimum prop-	
cumulative report, quarterly-----	11828	erty standards-----	4699
areas, map-----	8016, 17026	urban renewal report (statement),	
areas, summary list-----	1754	value of prime contracts awarded	
community renewal program, pol-		in ARA redevelopment areas,	
icy-----	3182	1963-----	9996
determination of benefits from		Redevelopment (periodical)-----	5930
water resource projects-----	9995	Redkey, Henry, rehabilitation	
District of Columbia-----		practices in Germany-----	5749
Adams-Morgan, democratic ac-		Redmon, Donald E., determining	
tion to save neighborhood-----	21257	mine-production schedules by	
include nonresidential areas, re-		linear programming-----	13117
port-----	12099	Redox fuel cells, see Electric batteries	
pay relocation costs-----	21121	Reductase activity of human whole	
law-----	15570	saliva as related to dental	
reports-----	478,	caries experience-----	11808
District of Columbia act of 1945,		Reduction in force, see Government	
amend, hearings-----	6349	offices-----	
District of Columbia Plaza proj-		Reduction of fold-over errors in flux-	
ect, terminate, report-----	12113	gate magnetometers-----	21758
economic redevelopment re-		Reduction of Nonessential Federal Ex-	
search-----	17024-25	pensitures Joint Committee:	
grant applications-----		committee prints-----	3211-12
effectiveness-----	17877	expenditures, authorization limita-	
local review, report-----	4542	tion, remove, report-----	19579
national survey-----	4583	Redundant circuits, see Circuits	
Guam, public authority to under-		Redwood, tractor-logging costs and	
take urban renewal, law-----	251	production-----	8689
housing and community develop-		Redwood City, Calif., port, harbor	
ment legislation, hearings-----	8370	conditions, etc-----	622
Impact of Federal programs on local		Redwood County, Minn., Redwood	
government organization and		Falls area, ground water con-	
planning-----	14139	ditions-----	15958
Jefferson County, Ill., proposals		Reed, John C., jr., geology of Linville	
for making development program		Falls quadrangle, N.C-----	19773
more effective, ARA field re-		Reed, Louis S.:-----	
port-----	11824	enrollment in Blue Cross-Blue	
listing of land in urban renewal		Shield plans, etc., 1940-62-----	13454
project, areas available for		health benefit plans under collective	
private redevelopment-----	7827	bargaining-----	7739
local public agency letters-----	3692	independent health insurance plans,	
mortgage insurance, utilizing FHA		1963-----	15087
sec. 221(d)(3) below market		Reed, Morton J., electronic data	
interest rate-----	16903	processing codes for California	
OEDP status report-----	5929	wildlife plants-----	8661

Do not order from index; see indicated entry

Page 537



# INDEX 1964

Entry	Entry
Reed, Sarah R.: library education directory 1962-63..... 4624 library research in progress..... 8486-87, 14190	Refractory materials—Continued high-temperature nickel-base alloys, influence of rare-earth elements on properties, USSR study..... 1149 high-temperature tensile testing in vacuum, apparatus facilitates..... 14805 refractories, current industrial reports..... 3391 rocket nozzle inserts, thermal shock evaluation..... 13331 summary, 1963, current industrial report..... 17099 <i>see also</i> names of materials.
Reed, William H., CH-21A helicopter airframe deformation under dynamic crash condition..... 9858	Refractory metals, <i>see</i> Metals.
Reeder, John P., closed-circuit television for aircraft landing..... 7543	Refrigerated storage warehouses, <i>see</i> Warehouses.
Reelfoot National Wildlife Refuge, general information..... 6726	Refrigeration and refrigerating machinery: equipment— current industrial report, 1962..... 17090 Federal item identification guides for supply cataloging..... 12292 supplements..... 3473 liquid carbon dioxide refrigeration in frozen-food trailer, test..... 8
Reemployment of veterans, <i>see</i> Veterans.	Refrigeration mechanics, <i>see</i> Mechanics (persons).
Reemployment rights, <i>see</i> Government officials and employees.	Refrigerators, household, safety devices for doors, progress, hearing..... 4500
Reentry into atmosphere, <i>see</i> Atmospheric entry.	Refugees: Cuban— problem, hearings..... 2242, 6516 program..... 7847 selection, security screenings, etc., for resettlement in U.S., foreign operations appropriations, 1965, hearings..... 12117 population problems study..... 2115 problems, investigation— additional funds, report..... 17812 authorization, report..... 6455 refugees and escapees, report..... 12208
Reentry vehicles, <i>see</i> Spacecraft.	Refuges, <i>see</i> Wildlife refuges— <i>also</i> names of refuges.
Rees, George H., edible crabs of U.S. (Pseudosquilla): abstracts on zooparasitology..... 4938, 4999, 5098, 9335, 9337 translations..... 12803-804	Refunds of taxes, <i>see</i> Tax refunds.
Refineries, <i>see</i> Petroleum refineries.	Refuse: burning coal-mine refuse banks, survey..... 7428 disposal of poultry manure and other waste..... 16932 farmstead disposal..... 22 International Research Group on Refuse Disposal, information bulletins..... 15056 national status on control of garbage-feeding..... 3766 screenings, prohibit importation, report..... 21190
Refining, <i>see</i> Smelting.	Regeneration (biology): controversial problems with modern teachings, USSR study..... 4892 cortical neurons, possibility of division, USSR study..... 5004 lodgepole pine, slash disposal and cone opening, study..... 14319 new trend in research, USSR study organs, regenerative processes, study..... 4263 yellow birch, artificially constructed mounds show promise..... 779
Reflection: and transmission coefficients at interface ice-solid..... 14202 Lenin's theory, relative to concept of information, USSR study..... 18315 transient, and transmission of plane wave normally incident upon semi-infinite anisotropic plasma..... 19170	Regional Water Pollution Control Laboratory, Midwest, <i>see</i> Midwest Regional Water Pollution Control Laboratory.
Reflection (light): Fortran program for calculation of reflection coefficients from thin films..... 13277 laser-satellite reflection parameters, vectorial reflectance of Explorer IX satellite material..... 16701	Register of Scientific and Technical Personnel, National, <i>see</i> National Register of Scientific and Technical Personnel.
Reflectometers, VSWR measurement, instrument calibration technique..... 13354	Register-vote 5c commemorative postage stamp..... 16814
Reflectors: ellipsoidal optical, reproduced by electroforming..... 20544 Fresnel cup reflector directs maximum energy from light source..... 13173 plastic films for reflective surfaces reproduced from masters..... 20558 spherical, monopole phased array feed..... 13632	Registers: Air Force— departmental edition..... 5888-89 document edition..... 6198-99
Reflexes: blinking conditioned, and functional state of cardiovascular system, simultaneous study, USSR..... 12924 conditioned— effect of constant magnetic field in sea fish..... 3040 responses to magnetic field in fish..... 5533 USSR studies..... 48363 conditioned trace, comparison of trace imitation in chimpanzee, USSR study..... 16170 reflex action of nervous system, USSR studies..... 19956 Soviet research on higher nervous activity under pathological conditions..... 19868 systems and chemical influence on conditioned reflex activity, USSR study..... 7062	
Reforestation, <i>see</i> Forest planting.	
Reformatories, Maryland training schools, integrating..... 13782	
Refractory alloys, <i>see</i> Alloys.	
Refractory-clay deposits of Utah..... 13106	
Refractory materials: ceramic, wide usage, low fabrication cost..... 11375	

Entry	Entry
	<b>Registers—Continued</b>
	<b>Army—</b>
	departmental editions..... 10017-19
1149	document editions..... 10181-183
	Army National Guard, 1964..... 14945
4805	civil aircraft, United States..... 6733, 18033
	Coast Guard Reserve..... 8174
3391	Federal register..... 3487
	codification guide and parallel
3331	table..... 3488
	index..... 3489
7099	Federal register act, amend law..... 270
	foreign aid, voluntary agencies..... 10710
	Hill-Burton projects..... 3574
	labor organizations, reporting, Jan.
	1, 1964..... 16569
	Great Lake States..... 16572
	Middle West, Rocky Mountain
	States..... 16573
7090	Northeastern States..... 16570
	Southeastern States..... 16571
1292	Western States..... 16574
3473	Military Academy, West Point,
	1963..... 9491
8	Naval Academy, Annapolis, 1963-
	64..... 9666
	Naval Reserve officers..... 3082
	Navy and Marine Corps, officers-
	departmental edition..... 11486
4500	document edition..... 10180
	papers in Library of Congress—
	Culbertson, William S..... 5458
6516	Olmsted, Frederick L..... 1390
7847	Registration, see subjects.
	Registry of animal cell lines certified
2115	by Cell Culture Collection
	Committee..... 11571
12117	Registry of national historic land-
2115	marks..... 14976
	Regression (statistics):
	computer methods, fitting surfaces
17812	to assay and other data by
6455	analysis..... 18691
12208	Regular Navy, see Navy.
	Regulations, see Code of Federal regu-
	lations—also names of depart-
	ments, etc., issuing regula-
	tions—also subjects.
7428	Regulatory announcements, Fish and
	Wildlife Service..... 15925, 19734
16932	Rehabilitation:
22	Guam, law..... 250
	urban renewal areas, minimum
15056	property standards..... 4699
	see also subjects.
3766	Rehabilitation advisers, employment
	outlook..... 9387
21190	Rehabilitation of the disabled:
	aging disabled worker, successful
	programs..... 3185
	case recording in rehabilitation..... 20874
4892	controversial relationship to reha-
	bilitation of disabled workers..... 16909
5004	German practices..... 5749
14319	Inservice training in stroke rehabi-
7075	litation for care facility person-
	nel in Oregon..... 11561
4263	mentally ill, helping..... 5748
	mentally retarded—
	characteristics..... 16911
779	employee, information for super-
	visor..... 19012
	programs and facilities of Western
	Europe..... 1651
	rehabilitation, decade hence..... 20873
	rehabilitation record..... 3966
	rehabilitation service series..... 7834,
	9873, 20874
	stroke is community problem..... 9729
16814	stroke rehabilitation program guide-
	lines with model plan for com-
	munity action..... 13399, 20749
88-89	veterans, vocational rehabilitation
98-99	and education, quarterly infor-
	mation bulletin..... 1649, 9867

Entry	Entry
	<b>Rehabilitation of the disabled—Con.</b>
	<b>vocational—</b>
	agencies, professional examina-
	tion service..... 9872
	clients, adjustment..... 3184
	medical consultations..... 9873
	programs, regulations governing..... 13510,
	20872
	restoration, teamwork approach
	(remarks)..... 14684
	staff, training guides in motiva-
	tion..... 7834
	State agency casework, 1962..... 13509
	evaluating..... 10667, 19807
	State salary ranges..... 10667, 19807
	tuberculous..... 7835
	vocational rehabilitation act, exten-
	sion and improvement pro-
	gram, grants..... 9869
	Vocational Rehabilitation Adminis-
	tration, advisory groups,
	1964..... 16908
	VR-ISC series..... 7835
	Reichard, T. W., creep and drying
	shrinkage of lightweight and
	normal-weight concretes..... 9634
	Reid, Richard:
	examination of onboard training for
	extended space flights..... 21761
	technique for determining deviation
	in lunar transfer orbit ephemer-
	is..... 21747
	Reid, William J., Jr.:
	control of caterpillars on commer-
	cial cabbage and other cole
	crops in South..... 9939
	pickleworm, how to control on cu-
	cumber, squash, etc..... 11766
	Reigner, Irvin C.:
	calibrating a watershed by using
	climatic data..... 8679
	evaluation of trough-type rain
	gages..... 14322
	how to make wind-movement
	recorder from any spare drum-
	type recorder..... 21327
	Relly, John F., testimony, hearings..... 2244
	Relly, John R., nomination, hearings..... 4576
	Reimherr, George W., magnetic thin
	film materials survey..... 20642
	Reinforced plastics, see Plastics.
	Reinforcements, eyelet, gummed cloth,
	Federal standard..... 2331
	Reinhardt, Walter A., numerical pre-
	dictions of nonlinear diffusion
	with homogeneous recombination
	and time-varying bound-
	ary conditions..... 7526
	Reinhart, Kenneth G., stream-gaging
	stations for research on small
	watersheds..... 13581
	Reinhers, Helen, therapeutic use of
	student volunteers..... 17116
	Reins, D. A., acute and chronic effects
	of insecticide endrin on renal
	function and renal hemo-
	dynamics..... 13728
	Relation of peristimulatory adapta-
	tion to other short-term thresh-
	old-shifting mechanisms..... 5467
	Relativity (physics):
	astorelativity..... 5528
	Relaxants (drugs), see Muscle re-
	laxants.
	Relays, see Electric relays.
	Releases, see name of office issuing
	releases.
	Reliability (mechanical):
	and cybernetics, USSR study..... 7051
	basic directions in theory, USSR
	study..... 1177
	electrical connections, technology
	handbook..... 7478
	electronic computing machines, re-
	liability of manufacture, USSR
	study..... 20216

# INDEX 1964

Entry	Entry
Reliability (mechanical)—Continued	Renovising—Continued
engineering handbook..... 16801	industrial—continued
engineering, specifications, etc.,	Southwestern Conference pro-
Naval Weapons Bureau film	ceedings, Jan. 17, 1964..... 13744
brochure..... 18867	Tri-State regional conference,
progressive failure prediction..... 13642	proceedings, Jan. 9, 1964..... 11881
RADC notebook, revised pages..... 69	Washington State Conference pro-
reliability and redundant circuitry..... 21737	ceedings, Mar. 31, 1964..... 13745
Relief work:	industrial modernization (re-
disaster communications service,	marks)..... 10132
FCC rules and regulations..... 3992,	modernization—
6626	key to new markets (addresses)..... 10043,
disaster relief, status of funds and	11880
summary of allocations to each	of Federal salary systems..... 12058
State, report..... 8251	Rent:
in Uzbekistan, mountain slide and	garages used by VA field station
rescue operations..... 12864	employees, loss of revenue re-
Religions:	sulting from inadequate rental
cybernetics and anti-religion, USSR	rates, GAO report..... 10608
study..... 20259	inadequate rental rates for Govern-
cybernetics and religion, USSR	ment-owned housing at Brook-
study..... 20418	haven National Laboratory,
human rights, recent developments	AEC, GAO report..... 10605
in Soviet bloc, hearings..... 8381	oil and gas leases, timely payment,
inter-faith consultations on wel-	report..... 17835
fare, minutes..... 6830, 12532	Prisons Bureau, employee housing,
USSR—	inadequate charges, GAO re-
renewed struggle against..... 7185	port..... 10606
survival, causes and means for	Rental housing, <i>see</i> Housing.
elimination..... 14553	Reorganization of Government activi-
Religious activities, religious exercises	ties, <i>see</i> Government reorganiza-
in public schools, Supreme	tion plans.
Court decision, explanation..... 571	Repair kits:
Religious bodies, break-up of IPKhs	emergency, for large diameter tube-
illegal sect by Soviet authori-	less tires and rolling liquid
ties..... 7101	transporters..... 5722
Relishes, <i>see</i> Pickles and relishes.	unnecessary costs incurred in pro-
Reliz Canyon, geology..... 4776	curement from Hamilton
Relocation (housing), <i>see</i> Redvelop-	Standard Division, United Air-
ment (city planning, etc.).	craft Corp., Windsor Locks,
Remer, Ida, handbook for guiding stu-	Conn., Air Force Dept., GAO
dents in modern foreign lan-	report..... 12490
guages..... 2273	Repair parts:
Remote control:	aircraft—
predictor for systems operating	approved, and supplemental type
with signal transmission de-	certificates summary, supple-
lays..... 3034	ments..... 4069
railroad operations, USSR studies..... 18465	Defense Dept. action in cancelling
Rempel, John R., shock-wave attenua-	excessive procurements and re-
tion in elastic-rigid foam..... 5893	distributing spare parts pro-
Renal diseases, <i>see</i> Kidneys.	grammed for or delivered to Por-
René 41, mechanical properties at	tugal under military assistance
800°, etc., for use in supersonic	program, GAO follow-up re-
transport..... 18718	view..... 18088
Renegotiation, <i>see</i> Government con-	Army National Guard equipment,
tracts.	controlled cannibalization..... 11443
Renegotiation act of 1951, <i>see</i> Govern-	follow-up review of failure to use
ment contracts.	excess spare parts and assem-
Renegotiation Board:	bles in aircraft production,
annual report, 1963..... 5674	Navy Dept., GAO report..... 8722
appropriations, 1965, hearings..... 10290	Hawk air defense guided-missile
bulletin..... 18930	system, unnecessary disposal of
practice and procedure, extend—	spare components, GAO re-
law..... 13888	port..... 19768
reports..... 8348, 10222, 14055	high-precision, casting alloys, USSR
regulations, compilation..... 11594	investigation..... 16069
renegotiation act of 1951, as	missile, unnecessary procurement
amended..... 21863	due to failure to identify and
rulings..... 7720, 11595	utilize available spare parts,
rulings and bulletin, index..... 11595	8th Army, Korea, Army Dept.,
Renne, Roland R.:	GAO report..... 12500
remarks—	nonrecoverable spare parts, unnec-
Oct. 3, 1963..... 1724	essary procurement resulting
Jan. 28, 1964..... 7014	from failure to review require-
Reno, Horace T.:	ments, 1963, Air Force Dept.,
iron ore..... 5478, 21694	GAO review..... 8744
iron oxide pigments..... 18672	unnecessary retention of spare
Renovising:	parts at Western Pacific sup-
how to succeed by really trying,	ply depots, Navy Department,
BDSA aids to modernization..... 19277	GAO report..... 10624
industrial—	wasteful practices in management
Long Island Conference, proceed-	of age-controlled aeronautical
ings, Apr. 16, 1964..... 13742	spare parts, Air Force Dept.,
Portland Area Conference pro-	GAO report..... 8745
ceedings, Mar. 26, 1964..... 13743	<i>see also</i> names of repair parts.

try

744

881

745

132

943.

880

058

608

605

835

606

722

249

069

8088

1443

8722

9768

6069

2500

8744

0624

8745

## Entry

Repair shops:	
equipment, Federal item identification guides for supply cataloging	12291
supplements	3472
Repair stations, <i>see</i> Aircraft repair stations.	
Repairing, repairs and utilities, Army technical manual, sheet metal.	10012
<i>see also</i> subjects.	
Repairmen, <i>see</i> Mechanics (persons).	
Repairs and utilities, work sampling.	1763
Repatriates:	
U.S. citizens from foreign countries, temporary assistance, extend—	
law	13896
reports	8345, 12240
Repellents, dog repellent, use by postal employees, questions and answers	20730
<i>see also</i> Insect repellents.	
Reporter, clearinghouse of studies on higher education	598
Reporters and reporting:	
Armed Forces news style guide.	17030
author's guide for technical reporting	19160
employment outlook	7379
Reports, to be made to Congress, list.	6223
<i>see also</i> names of departments, etc., issuing reports— <i>also</i> subjects.	
Reproducing processes, <i>see</i> Duplicating processes.	
Reproduction:	
loblolly pine stands in eastern Maryland, conditioning for regeneration	787
ponderosa pine, dwarfmistletoe control opportunities	6739
Reptiles, Okefenokee National Wildlife Refuge, list	19733
Republic of China, <i>see</i> China.	
Republic of Congo (Leopoldville), <i>see</i> Congo (Leopoldville).	
Republic of Dahomey, <i>see</i> Dahomey.	
Republic of Ireland, <i>see</i> Ireland.	
Republic of Ivory Coast, <i>see</i> Ivory Coast.	
Republic of Korea, <i>see</i> Korea.	
Republic of Malagasy, <i>see</i> Malagasy.	
Republic of Mali, <i>see</i> Mali.	
Republic of Panama, <i>see</i> Panama.	
Republic of Philippines, <i>see</i> Philippines.	
Republic of Sudan, <i>see</i> Sudan.	
Republic of Vietnam, <i>see</i> Vietnam.	
Republican Leadership, Joint Senate-House, <i>see</i> Joint Senate-House Republican Leadership.	
Republican Party:	
platform, 1964	19438
report—	
88th Congress, 1st session	2133
88th Congress, 2d session	19536
supplement	21218
Reque, Robert R.:	
Court of Customs and Patent Appeals—	
customs cases adjudged	6533
patent cases adjudged	6534
Requisitions:	
MILSTRIP, military standard requisitioning and issue procedures, manual	10451
changes	12300, 19618, 21256
Rescue equipment and appliances:	
Federal item identification guides for supply cataloging	12291
supplements	3472
Fulton air-to-ground pickup system for Caribou aircraft	11667
pararescue medical kit	9979
personal equipment, handbook, Air Force manual	5885

## Entry

Rescue operations, <i>see</i> Relief work—	
Rescue work.	
Rescue work:	
civil defense, light duty rescue course, instructor's course	6067
national search and rescue manual, amendment	222
rescue skills and techniques	4371
Research:	
and development, decision-making in business firm	9664
ARA economic redevelopment program	13664
basic and applied, Rumania	990
Education Office—	
cooperative program newsletter	3369
cooperative projects, 7 year summary, July 1, 1956-June 30, 1963	14180
external research lists	7750-59, 9786-95, 20812-818
external research papers	9779-85
Federal research and development programs—	
extend time for making report, report	15539
hearings	6357, 10316
print additional copies, report	6317
progress report—	
committee print	6358
report	6287
Germany, activities of Economics Ministry	5572
Government, effect on economic growth, hearings	19608
Government research and development, requirements merry-go-round (remarks)	10039
Government research reports	4101
interdisciplinary, psychiatric index, guide to literature, 1950-61	19011
Library of Congress facilities	11308
naval, reviews	3774
policy research studies (series)	9802-4, 11625, 16872
postdoctoral associateships in physical and mathematical sciences, opportunities at NBS	1495
Public Health Service advanced waste treatment program	13391
research and development—	
grants, administration, study report	15575, 15589
manpower for, study—	
committee print	19511
report	19474
obligations for, etc., print additional copies, report	19477
research and your job (address)	15177
research, development, and test facilities, Navy design manual, changes	8200
research profiles	7590
9646, 15952-956, 16752, <i>see also</i> Military research—Physical research—Scientific research— <i>also</i> names of departments, etc., doing research— <i>also</i> subjects.	18816
Research analyst operations, examination announcement	214, 17145
Research and development abstracts of USAEC	3973
Research and Development Laboratories, Engineers, <i>see</i> Army Engineer Research and Development Laboratories.	
Research and development reports:	
Atomic Energy Commission	111-131, 1767-82, 4291-4303, 5950-92, 8046-89, 10023-34, 11851-869, 13689-719, 15278-289, 17057-64, 21012-18, 19225-256.
price list	4324
Coal Research Office	219, 4401



# INDEX 1964

	Entry		Entry
Research and statistics notes-----	1589,	Reserve Officers' Training Corps, Air Force—Continued	
3133-34, 5690-91, 7739-40, 9774,		program, vitalize and improve—	
13454-455, 15086-87, 16862,		hearings-----	2105, 17868
20799-800, 21876.		law-----	21139
Social Security Administration, index-----	7733	reports-----	362, 12101, 21234
Research and Technology Division, technical documentary reports-----	5893-94, 11804	Reserve Officers' Training Corps, Army:	
Research Division, Apprenticeship and Training Bureau, report-----	11817	flight instruction for members, permanent authority, report-----	15739
Research Facilities and Resources Division, National Institutes of Health, mission of serving health research-----	3058	manuals-----	1764, 10011, 17050, 19214
Research in reading readiness-----	600	program, vitalize and improve—	
Research Institute for Grains and Industrial Crops, Rumania, activities-----	9124	hearings-----	2105, 17868
Research laboratories, biomedical, space planning principles-----	1563	law-----	21139
see also names of laboratories or places where located.		reports-----	362, 12101, 21234
Research notes, Forest Service-----	772-783, 2374-87, 6743-49, 8535-70, 10589, 12441-472, 14308-329, 18050-78, 21326-328.	you and Army ROTC-----	10020
Research papers:		Reserve Officers Training Corps, Navy:	
Forest Service-----	784-790, 2388-91, 6750-51, 8671-94, 10590, 12473-481, 14330-333, 18079-86, 19749-750.	flight instruction for members, permanent authority, report-----	15739
physical sciences research papers-----	13636-645, 17003-8, 19165-176	program, vitalize and improve—	
Research reports:		hearings-----	2105, 17868
Cold Regions Research and Engineering Laboratory-----	8507-10, 10485-486, 12343-346, 15865, 17937, 19649-651, 21277.	law-----	21139
Fish and Wildlife Service-----	10570, 14282, 21317	reports-----	362, 12101, 21234
National Cancer Institute-----	11453	Reservoirs:	
Reclamation Bureau-----	9749	China, USSR studies-----	5043
Social Security Administration-----	16863	Columbia River basin, storage in major power reservoirs, monthly report-----	4058
Index-----	7733	cooling, hydraulic design, USSR study-----	18364
Reservations, see names of reservations.		Government constructed, local interests defined, report-----	4529
Reserve components of Armed Forces: construction appropriation, 1965-----	17434	ground-water, use for storage of surface water in San Joaquin Valley, Calif-----	6814
law-----	17604	inland, microbiology, USSR study-----	5116
reports-----	12059, 12061	outlet structures, hydraulic design, engineering manual-----	616
enlisted members, cancellation of indebtedness, report-----	13941	Pacific Northwest, month-end storage in major reservoirs-----	4058
enlistment of aliens-----		radiation microbiology problems in sanitary protection, USSR study-----	21631
hearing-----	6496	sanitation of beds, USSR studies-----	933
law-----	1965	storage, Cenomanian-Turonian aquifer of central Israel, its development and use as storage reservoir-----	21358
reports-----	329, 2211	United States, sediment deposition surveys made through 1960, summary-----	13593
facilities, construction appropriation, 1965-----		water, self-purification of cisterns, 137, USSR study-----	18359
hearings-----	15795	Residence and migration of college students, fall, 1963-----	21271
reports-----	15772	Residence (law), see Domicile.	
facilities, construction authorization, law-----	254	Residences, see Houses.	
facilities, construction authorization, 1965-----		Resident research associateships, postdoctoral, 1964-65, tenable at National Bureau of Standards-----	1495
hearings-----	6345, 12252	Residential construction, see Building.	
law-----	17249	Resins:	
reports-----	6334, 8289, 14053, 15487	anion exchange, scintillating, final report-----	13702
physicians appointments and residency consideration program, information bulletin-----	15826	composition and fillers effect on performance of molded charring ablator-----	3017
see also Army Reserve—Naval Reserve—Pay, allowances, etc.		epoxy-asphalt concrete paving mixtures, laboratory and field study-----	6598
Reserve officers, see Reserve Officers' Training Corps, Air Force—Reserve Officers' Training Corps, Army—Reserve Officers' Training Corps, Navy.		epoxy bond, stringent cleaning technique recommended-----	14830
Reserve Officers' Training Corps, Air Force:		epoxy, new method forms bond line free of voids-----	21745
flight instruction for members, permanent authority, report-----	15739	ion-exchange-----	

Entry

7868  
1139  
12345789  
9214  
7868  
1139  
1234  
9020

5739

7868  
1139  
1234

4058

3364

4529

3814

5116

616

631

933

1358

3593

3359

1271

1495

3702

3017

3598

1830

745

3798

2673

1863

9553

Entry

Resins—Continued	
photoelastic materials, static and dynamic properties	5596
separation of lanthanide series and yttrium using phosphonic and iminodiacetic acid resins	18693
Resistance, <i>see</i> Electric resistance.	
Resistance thermometers, <i>see</i> Thermometers.	
Resistance to diseases, <i>see</i> Diseases.	
Resolutions:	
digest	3421
history	3351
<i>see also</i> House bills—Law—Senate bills.	
Resonance:	
chemical reaction rates, resonance theory, USSR study	1151
electron paramagnetic, spectra of amino acids and proteins under gamma radiation and light, USSR study	9257
electron spin, pentavalent chromium complexes investigation, USSR study	14622
interaction of electromagnetic waves with slabs of plasma	20602
optical, scattering at Lyman-alpha by atomic hydrogen cell	13221
p-y phenomenological characteristics, investigation	5616
region, electromagnetic scattering cross sections modification, symposium record	19189
<i>see also</i> Magnetic resonance.	
Resonance capture, <i>see</i> Neutrons.	
Resource bulletins, Forest Service	8695-8700, 12482, 21329
Resources, <i>see</i> Natural resources.	
Resources analysis memo	20651
Respiration:	
dynamics and work of breathing, effects of compressibility of alveolar gas	1745
helium and oxygen mixture, effect on speech	5469
in vivo measurement of total gas pressure in mammalian tissue	1789
thoracic cage impedance measurements, cancellation of respiration effects on transthoracic impedance	5906
Respiratory equipment, <i>see</i> Breathing apparatus.	
Respiratory organs, upper, classification of tumors, USSR studies	14516
Respiratory system, human, maximum pressure-volume relationships	13648
Response to disaster, Alaskan earthquake, Mar. 27, 1964	19703
Responses (psychology):	
human vestibular responses, task, control of arousal and effects of repeated unidirectional angular acceleration	13731
schoolchildren's physical and emotional responses, USSR studies	10994
Responsibilities of a global power, address	20985
Restaurants, lunchrooms, etc.:	
employees, coverage under fair labor standards act, provide, hearings	19507
extending minimum wage	5752
industry wage survey	16806
occupations, employment outlook—starting and managing small restaurant	7731
Restorative processes in radiation injuries, USSR	21408
Restraint apparatus:	
animal, technique for making	20545
CH-47 Vertol Chinook, studies	21905-906

Entry

Restraint apparatus—Continued	
CV-2 DeHavilland Caribou, study, for thoracic roentgenographic examination of unanesthetized primates	20854 1749
Restuccia, Vincenzina C., relief	1881, 2155
Retail commerce, <i>see</i> Retail trade.	
Retail credit, and collections, bibliography	20786
Retail prices, <i>see</i> Prices.	
Retail produce manual	15211-213
Retail stores, <i>see</i> Stores.	
Retail trade:	
census, 1958, reconciliation with monthly report	1825
census of business, 1958, area reports	21026
current retail trade reports	3392-94, 13767
discount retailing, bibliography	11605
employee earnings, June 1962	1376
fair labor standards act, provisions	19013
management audit for small retailers	20791
merchandising and promotion, bibliography	15080
merchants' share in administration program in consumer affairs (address)	8189
retail and service enterprises and establishments, under fair labor standards act	13514
retail sales, 1963	13767
retailing, bibliography	9764
stores, sales	
advance monthly	3392
monthly	3393
weekly	3394
USSR, retail commodity turnover, principles of planning	16200
<i>see also</i> names of commodities.	
Retailers, joint advertising programs, competitive and antitrust aspects, hearing	8457, 19607
Retaining walls, engineering and design, change	14205
Retina, cortical fibers, USSR study	10961
Retired officers, etc., relief, claims for increased retired pay, report— <i>see also</i> Armed Forces.	2032
Retired pay, <i>see</i> Pensions.	
Retirement:	
Central Intelligence Agency employees, improved system—	
hearings	6346
law	21135
report	10566
health benefits program for retired Federal employees, act of 1960, administrative expenses, hearing	8454
income and measures of need	7740
judges of D.C. retirement and disability act, amend—	
law	21136
report	17786
Nevada, divide system for social security purposes—	
law	17241
reports	8304, 12229
planning for retirement, university-labor union program	9888
program, now build with savings bonds	20778
rates for officers, prediction, Markov chain theory, application	15235
Secret Service Division members, credit for former police service—	
law	17335
reports	13974, 15783

# INDEX 1964

Entry	Entry
Retirement—Continued	Rewards (prizes, etc.)—Continued
State and local government employee-retirement systems—contributions, benefits, and beneficiaries, 1957-63-----	export expansion, E award to New Jersey Chamber of Commerce (remarks)-----
1963, finances-----	4414
uniformed services contingency option act, amend, report-----	FHA 1963 honor awards for residential design-----
17847	6632
see also Civil service pensions—Pensions—Railroad employees.	Hungarian Academy of Sciences awards outstanding scientists-----
Retrometer, light-beam communications system, description-----	7032
11362	incentive awards program, Federal employees-----
Revenue, see Internal revenue—also names of articles, etc. from which revenue is derived.	17135
Revenue agent, career in professional accounting-----	Lenin prizes—
4840	attainments, 1964, Soviet science and technology-----
Revetments, see Shore protection.	11228
Revision and Codification Subcommittee, Judiciary Committee, Senate, résumé of activities-----	nominations, 1964, science and engineering-----
8410	2743
Revisionism, Communist Party of Austria-----	USSR, science and engineering-----
2661	16030
Revivication, clinical death, experience in reviving organism, USSR study-----	presentation of award to Chauncey B. Smythe (remarks)-----
1267	4413
Revolutions:	President's E award for excellence in exporting—
South Vietnam—	Bacharach Industrial Instrument Co. (remarks)-----
comment by North Vietnamese—	17159
revolution will be won-----	Crutcher-Rolfe-Cummings, Inc. (address)-----
translations from Hoc tap-----	19349
7322	International Telephone and Telegraph Export Corporation (remarks)-----
Revolving funds:	19357
Indian loans to procure assistance before Indian Claims Commission, law-----	Jenks Metals Export, Inc., (remarks)-----
248	19360
Small Business Administration, increase—	Sierra Talc and Chemical Co. (remarks)-----
hearings-----	17160
law-----	Smith, Kirkpatrick & Co., Inc., (remarks)-----
reports-----	19362
467, 4464	President's E pennant for exports, Willson, International Ltd., Inc. (remarks)-----
Veterans' Administration relief from paying interest on funds transferred between funds—	19361
hearings-----	safety awards, National Crushed Stone Association, 1962-----
542, 4511	1397
law-----	water pollution control, research, etc., 1963 awards, list-----
reports-----	7711
2191, 4478	18102
see also Correctional Industries fund.	Rewey quadrangle, Wis., geology-----
Rewards (prizes, etc.):	Reyes, Robert J., cellular oxygen consumption at low oxygen tensions-----
American Legion's School Award Medal, patent renewal—	5896
law-----	Reynard, Diana, cancer chemotherapy abstracts-----
reports-----	18813
10203, 15616-617	Reynaud, Paul, book on De Gaulle foreign policy, French review-----
American Legion's School Award Plaque, patent renewal—	11005
law-----	Reynolds, Don B., testimony, hearing-----
reports-----	4394
17255	Reynolds, Hudson G., habitat relations of vertebrates of Sierra Ancha Experimental Forest-----
10204	12479
Armed Forces members, cash awards for suggestions or inventions—	Reynolds, Myron B., strain-cycle phenomena in thin-wall tubing-----
establish program, hearing-----	19232
19591	Reynolds, Thaine W., flux patterns resulting from free-molecule flow through converging and diverging slots-----
hearing-----	20581
17637	Reynolds County, Mo., redevelopment area, opportunities for economic growth-----
report-----	13657
17530	Reynolds numbers, effects on induced pressures of cylindrical bodies with different nose shapes and nose drag coefficients, helium-----
awards from National Institute of Dental Research-----	1486
9644	RG-TR series, Army Missile Command-----
CFA 1964 design awards program-----	7662
21099	Rhabdatomis Dyar, see Moths.
Charles Engelhard, Industrialist of year award dinner (remarks)-----	Rhenium:
8188	chromium-rhenium and derived alloys, mechanical properties-----
coal-mining industry, safety organization and activities of award-winning companies-----	21781
16625	industrial rhenium aerosol, hygienic characteristics, USSR study-----
E award for excellence, ceremonies, Westinghouse Electric International (remarks)-----	18372
229	USSR monograph-----
E award for export trade, Big Dutchman Automatic Poultry Feeding Co. (remarks)-----	7137
21096	Rheogoniometers, universities, duty-free entry-----
E pennant—	14049, 17230, 17580
Algas Industries, Los Angeles, Calif. (remarks)-----	Rhett, Robert G., testimony, hearings-----
21097	6526
field of international business, Fort Motor Co., Rawsonville, Mich. (remarks)-----	Rheumatic fever: and its prevention-----
21098	20752
	bibliography-----
	1564
	selected references-----
	15043, 18918

# JANUARY-DECEMBER

	Entry
Rheumatic heart disease, <i>see</i> Heart disease.	
Rheumatism, USSR research.....	20408
Rhizopriodon, <i>see</i> Sharks.	
Rhode Island:	
annual survey of manufactures, 1962, standard metropolitan statistical areas, and large industrial counties, statistics.....	4342
climatic summary 1951-60, decennial census.....	21920
electric rate books.....	671, 19699
fishery products, wholesale dealers, lists.....	704, 18005
geology of selected quadrangles (series).....	10630, 15942, 18105
labor organizations, reporting, register.....	16570
landings, fish and shellfish—annual summary, 1963.....	12416
monthly.....	3983
mineral industry, minerals year-book chapter.....	21705
municipal waste facilities, 1962, inventory.....	3101
municipal water facilities.....	18906
operate bridge across Mount Hope Bay, hearings.....	2123
public school finance program, 1962-63.....	595
weather stations, decadal census.....	15161
Rhode Island Seminar in Measuring Capacity to Work, report.....	7734
Rhodes, sailing directions.....	7632
Rhodesia, <i>see</i> Northern Rhodesia—Southern Rhodesia.	
Rhodonite, ores, Silverton district, Colo., metallurgical studies.....	13118
Rhyne, Richard H., power spectral measurement of atmospheric turbulence in severe storms and cumulus clouds.....	20596
Rhythm variations of neurons of reticular formation during lateral overloads.....	18797
Ribbons for typewriters, etc.: cotton cloth, Tariff Commission report.....	20848
fabric, cotton and nylon, Federal standard.....	14260
Ribonucleic acid:	
and collagen synthesis by fibroblasts during connective tissue growth, USSR study.....	16345
biosynthesis of antibodies induced by RNA from lymphatic nodes and spleen of immune rabbits, USSR study.....	9114
composition, structure and biological role, USSR study.....	21585
cortisone effect on metabolism in liver development.....	16732
distribution in testicles of rats after gamma-irradiation with Co <sup>60</sup> , histochemical characterization, USSR study.....	1271
labelled, in nervous system of white rats, detection, USSR study.....	18345
macromolecular structure problems.....	9342
metabolism in cells of human malignant tumor, radiation effect, USSR study.....	14574
nucleotide sequence, interpretation in conveying, USSR study.....	9360
soluble (transfer) S-RNA, molecules, optical anisotropy and conformation, USSR study.....	12801
synthesis in fish embryos, effect of radiation, USSR study.....	9218
variations of RNA in giant chromosomes of <i>Chironomus dorsalis</i> during metamorphosis, USSR study.....	4980
Rice, Gabrielle P., foreign gold and dollar reserves.....	12319

	Entry
Rice, J. Wade, recordkeeping systems, small store and service trade.....	9765, 21867
Rice, James M., silver-cadmium battery development program.....	20520
Rice, Katherine E.: basic data on economy of Mexico.....	6860
establishing business in Mexico.....	18179
Rice:	
acreage history transfer, amend 1938 law.....	6172
law.....	350
report.....	
California stocks and movement report.....	3300
distribution patterns in United States.....	19621
foreign agriculture circulars.....	3520
foreign trade prospects.....	8629
futures trading and open contracts.....	3548
market news.....	3984
supplement, rough rice receipts.....	5985
market summaries.....	1674, 20895
situation, 1963.....	4615
southern, inspected for export.....	4043
stocks, rough and milled.....	3986
storage, bins, use of reflective paints.....	9900
stored, insect pests, controlling.....	15206
U.S. exports under Government programs, 1962-64.....	14290
Richards, Francis A., spectrophotometric determination of ammonia and labile amino compounds in fresh and seawater by oxidation to nitrite.....	13347
Richards, Stanley I., India's agricultural trade trends.....	6558
Richardson County, Nebr. geology and ground water resources.....	21360
Richie, Boyd L., testimony, hearings.....	8456
Richland, Wash.:	
Hanford project, disposal of property on—law.....	17253
reports.....	13957, 14078
Richley, Edward A.: Knudsen flow entering circular tube.....	7521
numerical solutions of free-molecule flow in converging and diverging tubes and slots.....	13244
Richmond, George B., species trials at Waiakana Arboretum, Hilo, Hawaii.....	8687
Richmond, Gerald M., glaciation of Little Cottonwood and Bellis Canyons, Wasatch Mountains, Utah.....	15950
Richmond, Joseph C., measurement of thermal radiation properties of solids.....	1450
Richmond, Calif., port.....	623
Richmond, Va., occupational wage survey.....	7412
Richter, D. H., 1961 eruption of Kilauea Volcano, Hawaii.....	14345
Richter, Harold G., radio-release technique for measurement of moisture in gases, final report.....	13705
Rickert & Laan, Inc., relief.....	17677, 19371
Rickover, Hyman G., statement.....	2104
Ricupero, Esterina, relief.....	6226
Ridge, Paul F., relief of estate.....	2013,
	6419, 17216
Riecker, R. E.:	
application of induction heating to rock deformation apparatus.....	13631
bibliography of rock deformation.....	19188
new shear apparatus.....	1739
olivine shear strength at high pressure and room temperature.....	19155
shear deformation of upper mantle mineral analogues.....	19151



# INDEX 1964

Entry	Entry
Rieger, Samuel, soil survey of Fairbanks area, Alaska-----	1593
Riehl, W. A., reactivity of titanium with oxygen-----	16722
Rifle, Colo., oil shale mining, 1944-56-----	21684
Rifle practice, <i>see</i> Target practice.	
Rifles:	
M14-----	
spare parts, unnecessary costs resulting from Government production rather than procurement from commercial sources, GAO report-----	6789
unnecessary costs incurred in furnishing ammunition for test-firing, Army Dept., GAO report-----	8736
M14, 7.62 mm, wood and plastic stocks, one-year tropical exposure test-----	11527
National Guard (State) trophy, NGB, announcement of winners, pamphlet-----	21788
National Rifle Association, indoor rifle tournament, announcement of winners, NGB pamphlet-----	20644
NGB indoor matches, postal, announcement of winners, pamphlets-----	18812
<i>see also</i> Shooting.	
Rigging:	
components of Army air/ground pickup system airdrop of supplies and equipment-----	19219
water purification unit, Erdlator 600 gph trailer-mounted, airdrop of supplies and equipment-----	19220
<i>see also</i> Masts and rigging.	
Rights of persons, constitutional rights of military personnel, hearings, summary-----	10426
<i>see also</i> Civil rights.	
Rights-of-way, <i>see</i> Railroads--Roads and highways.	
Rigid foam for mines-----	7445
Riley, Charles E., flat cable electrical connectors-----	7662
Riley, Donald R., pilot control of orbital docking of attitude-stabilized vehicles-----	5513
Riley, Harold L.: crushed limestone operations, Watauga Quarry-----	1405
mineral industry of Kentucky-----	1413
Riley Whittle, Inc., accident-----	14405
Rima, Donald R., ground-water resources of southern New Castle County, Del-----	4823
Rinehart, C. Dean, geology and mineral deposits of Mount Morrison quadrangle, Calif-----	6804
Ring counters, advanced or retarded by command signal-----	16675
Ring shake associated with sapsucker injury-----	786
Ringel, Seymour, information assimilation from alpha-numeric displays-----	13685
Rings, <i>see</i> Electric slip rings.	
Ringwald, William J., soil survey, Cotton County, Okla-----	5696
Rio Grande and Valley:	
canalization project, maintenance costs-----	
hearings-----	14000
law-----	19408
reports-----	10405
floods result of Falcon Dam construction, claims of inhabitants of area, settlement-----	
law-----	17306
reports-----	2033
Rio Grande and Valley--Continued	
flow resistance and sediment transport near Bernalillo, N. Mex-----	10646
lower, ground water resources of area-----	14348
middle Rio Grande, N. Mex., fluvial characteristics and hydraulic variables-----	4799
packing mature green tomatoes, costs, etc-----	20929
relocation, convention with Mexico-----	2137
relocation, convention with Mexico, implement-----	4580-81
hearings-----	81, 8378
law-----	10143
reports-----	4521, 4566, 6332, 8342
spillway for Amistad Dam, hydraulic model investigation-----	19662
stream gaging control structure for Rio Grande conveyance channel near Bernardo, N. Mex-----	21357
water supply outlook and snow surveys of drainage basins-----	4138
Rio Puerco, sediment transport parameters-----	811
Rioja, Carmen, and child, relief-----	6264
	10387, 11995
Ripley, Thomas H., deer browse resources of north Georgia-----	8697
Ripley formation, <i>see</i> Cretaceous period.	
Rippy, Mary A.: data on patients of outpatient clinics in United States, 1962-----	5554
outpatient psychiatric clinics, special statistical report, 1962, adolescents-----	13287
Riprap, stability, overflow embankments, Arkansas River-----	14212
Ritchie County, W. Va., lithology and reservoir properties of Big Lime, Keener, Big Injun, Weir and Berea Horizons, Spruce Creek oilfield-----	1444
Rivers, Joseph, HASL contributions to study of fallout in food chains-----	15282
Riverdale, Ill., population, special census-----	8131
Rivers:	
and harbors, miscellaneous bills, 1964, hearings-----	17663
basins commissions, establish-----	
hearings-----	12140
reports-----	494, 17621
basin plans, additional authorization-----	
law-----	1980
reports-----	474, 2050
Canada, ice prediction curves-----	17937
contributions to stream-basin hydrology (series)-----	2422, 2135
daily stages, 1961-----	13526
discharge ratings for streams at submerged section controls-----	18150
dispersion of dissolved or suspended materials in flowing streams-----	4794
fluvial characteristics and hydraulic variables in middle Rio Grande, N. Mex-----	4799
fluvial sediment discharge in streams, determination of loads by measurement and analysis, hydraulic and geologic factors, effects on streamflow of Yakima River basin-----	4807
hydrology of tidal streams (series)-----	19791
hydrology related to optimum discharge for king salmon spawning in northern California Coast Ranges-----	14357
ice flow and shifts, USSR studies-----	18288
morphology and hydrology of glacial stream-----	4791

# JANUARY-DECEMBER

	Entry
<b>Rivers—Continued</b>	
North Carolina streams, water supply characteristics.....	2435
Permanent Creek, Santa Clara County, Calif., effect of urban growth on streamflow regimen.....	18139
physiographic and hydraulic studies (series).....	4791, 10642, 12510
Piedmont streams, flood frequency related to channel geometry.....	10642
river and harbor act of 1962, amend, report.....	19470
river basin surveys papers—departmental edition.....	11813
document edition.....	12018
river hydraulics (series).....	21357
runoff, Mongolian People's Republic.....	1211
sand-bed streams, relationships between discharge of sands and mean-velocity.....	18136
scour and fill in sand-bed streams.....	6808
sediment loads in streams, measurement and analysis.....	14363
sediment transported by Georgia streams.....	4812
stream discharge, calculating.....	18081
streamflow characteristics, relation to environment in Delaware River region.....	2422
transport of radionuclides by streams (series).....	4794
underfit streams—principles.....	18130
subsurface exploration and chronology.....	18131
USSR, geographical and climatic factors affecting regimes.....	20048
see also names of rivers, or places where located.	
<b>Rivers and Harbors Board, transfer certain functions of Beach Erosion Board to, law.....</b>	<b>252</b>
Riverside, Calif., occupational wage surveys.....	5437, 21673
<b>Riverton project:</b>	
acquire lands, deliver water, etc., in 3d division—	
amend act of Mar. 10, 1964—	
law.....	17427
reports.....	17601, 17796
law.....	8217
reports.....	2041, 6472
reauthorize to include all except Muddy Ridge area, hearings.....	2241
RNA, see Ribonucleic acid.	
Roach, F. E., absolute photometry of light of night sky, zenith intensity of Haleakala and Fritz Peak.....	14939
Road-check results, first half, 1962-63.....	14407
<b>Road machinery:</b>	
maintenance equipment, Federal Item identification guides for supply cataloging.....	12289
supplements.....	3470
<b>Road signs, see Roads and highways—signs (road).</b>	
<b>Roads and highways:</b>	
Arizona, construction practices, report.....	12111
challenges of highway transportation (remarks).....	13826
code of Federal regulations.....	6664
construction and maintenance, agreement with Paraguay.....	9834
construction contracts for Federal-aid programs in areas of substantial unemployment.....	9996

	Entry
<b>Roads and highways—Continued</b>	
disaster road program, amend U.S. Code—	
hearing.....	15820
law.....	21150
reports.....	17720, 19488
District of Columbia, financing by loan authorization and motor vehicle fuel tax increases, hearings.....	12125
Federal-aid highway act of 1964—	
hearings.....	8396, 12280
law.....	17282
reports.....	10211, 12066, 14093
Federal-aid highway systems, study future needs—	
hearing.....	6369
report.....	2088
<b>Federal aid program—</b>	
California, rights-of-way activities of Public Roads Bureau, legislative and policy requirements, GAO review.....	6771
New Jersey, right-of-way activities, inadequate administration, GAO report.....	21338
New York State, deficiencies and problem areas administered by Public Roads Bureau, GAO report.....	8710
policy requirements, Public Roads Bureau, improper waiver, GAO review.....	6768
<b>Federal-aid systems—</b>	
maximum desirable dimensions and weights of vehicles.....	19445
State permitted to increase mileage, report.....	14090
finance, 1921-62.....	16849
fire hazard reduction with chemical retardants.....	2378
ground water seepage from road cuts, flow meter for measuring.....	10589
Haines Road, winter maintenance, agreement with Canada.....	11632
<b>Highway construction program, criminal penalties in connection with false statements, hearings.....</b>	<b>14010</b>
highway needs studies, creating, organizing, and reporting.....	5670
highway planning notes.....	3573
highway planning technical report.....	5670
highway progress, 1963.....	9738
highway research and development studies using Federal-aid funds, 1963-64.....	13428
highway signs for survival, civil defense.....	6066
highway trust fund, financial conditions and operations, 1963 report.....	6214
military, in theater of operations, soil stabilization requirements.....	2299
miscellaneous highway legislation, 1964, hearing.....	21212
municipal, quarter century of financing, 1937-61.....	18928
national forest roads and trails, construct and maintain—	
law.....	21149
reports.....	14103, 19487
national program of scenic roads and parkways.....	15033
Navajo Indian Reservation road construction program, Arizona and New Mexico, deficiencies in administration, GAO review.....	18087
public roads (periodical).....	3948
publications, price list.....	18886

# INDEX 1964

	Entry		Entry
Roads and highways—Continued		Robertson, Jacques F., geology of lead-zinc deposits in Municipio de Januaria, State of Minas Gerais, Brazil	6796
right-of-way—		Robertson, James I., jr., Civil War	218
acquisition, bibliography	9737	Robertson, James L.: nomination, hearing	8439
activities of Inter-American Highway program in Costa Rica, unnecessary costs resulting from inadequacies in administration, Public Roads Bureau, Commerce Dept., GAO report	12498	remarks—	
appraiser, examination, discontinuance notice	1843	Nov. 21, 1963	684
road-user tax on selected motor vehicles, 1964	7715	Apr. 11, 1964	8586
rural main highways, accidents related to speed, driver and vehicle	20774	May 25, 1964	12405
safety for other 80 percent (remarks)	9739	Robertson, S. Harry, crash fire-inerting system for reciprocating engine helicopters	7816
scenic highways, establish national system, investigation, authorization, reports	462, 2197	Robbinove, Charles J., ground-water studies and analog models	18119
secondary road administration, 2d progress report on activities of Joint AASHO-NAOC Committee	13429	Robinson, Charles S., stratigraphy and structure of northern and western flanks of Black Hills uplift	21354
standard highway signs	7716	Robinson, Florence M., core tests, Simpson area, Alaska	19782
State highways bordering Fort Leavenworth Military Reservation and U.S. Penitentiary at Leavenworth, retrocede jurisdiction to Kansas—	17360	Robinson, G. D., Philmont country, rocks and landscape of famous New Mexico ranch	10647
law	17522	Robinson, G. M., earth fissures in southern Arizona	18117
reports	14110	Robinson, George B., wide range phase detector	9611
statistics, 1962	11589	Robinson, H. W. & Co., Inc., relief	1918, 2173
traffic regulation in emergency (remarks)	17374-375	Robinson, James C., axial temperatures and pressure distribution in EGCR development of PTD-1 program	11857
transportation planning in urban areas, hearings	411	Robinson, James F., making and preserving apple cider	9940
truth in public relations of highway programs (remarks)	6124	Robinson, Mercedes, see Orr, Mercedes R.	
U.S. Highway 70, eastern Arkansas vicinity, ground water resources	19802	Robinson, R. K., earthworms in relation to soil productivity	11743
West Virginia, right-of-way acquisition practices, report	8329	Robinson, Victor R., jr., relief	2011
work injuries and rates in highway and street construction industry	2960	Robinson-Patman act, see Prices	
see also names of roads or highways		Robson, Fred L., condensing pressure drop by improved Lockhart-Martinelli method	21729
Roasting (minerals):		Robusta eucalyptus wood, its properties and uses	18082
pollucite ores, techniques for extracting cesium	9505	Rochelle, Robert W., pulse-frequency-modulation telemetry	5520
Robbins, Hannah, relief	289, 1909	Rochester, N.Y.:	
Robbins, Leslie F., college and university enrollment facilities survey, 1961-65	10459	aircraft accident	13790
Robert S. Kerr Water Research Center, naming, report	6327, 12213	principal electric facilities, map	673
Roberts, Doris E., how to study patient progress	13406	Rock County, Wis., geology and ground-water resources	2428
Roberts, Ernest, jr., plastic thermal stresses and strains in finite thin plate of strain-hardening material	21764	Rock drills, see Drills (tools)	
Roberts, Frank H. H., jr., river basin surveys papers, inter-agency archeological salvage program	11813	Rock Island, Ill., occupational wage survey	7401
Roberts, Jenn, binocular visual acuity of adults, United States, 1960-62	13424	Rock Island Arsenal Laboratory, technical report	18860
Roberts, Owen, indexing and abstracting experimental support, final report	4257	Rock Island Dam, fish passage report, 1962	21319
Roberts, Sean C., flow visualization techniques used in full-scale flight tests	20858	Rock phosphates:	
Roberts, Thomas L., simulated Martian environment, germination, etc., of bacterial spores	78	minerals yearbook chapter	18677
Robertson, Harry F., mineral industry of Puerto Rico, Panama Canal Zone, Virgin Islands, and Pacific Island possessions	20491	phosphate rock deposits, area of high-grade, study	12504
		Rocket boosters, see Rockets	
		Rockets:	
		Aerobee 150A sounding, flight vibration data	14858
		atomization of 2 impinging water jets, effect of ambient air velocity	7509
		boosters—	
		control system, plants containing derivatives of control variable	13145
		manned guidance and control	14789
		penalty functions and bounded phase coordinate control	13152
		sufficient condition in optimum control	13146
		thrust, acoustic efficiency trends	14841
		time optimal control with amplitude and rate limited controls	14771

	Entry
<b>Rockets—Continued</b>	
braking of blunt nonlifting vehicles entering earth's atmosphere at very high speeds.....	11392
clamps align large rocket cases.....	7487
combustor performance, effect of interchanging propellants with coaxial injection.....	7536
Cricketsonde system, evaluation, preliminary.....	19156
engine, dynamic calibration of pressure transducers.....	3046
exhaust gases—	
comparisons of experimental free-jet boundaries with theoretical results obtained with method of characteristics.....	14865
highly underexpanded free jets impinging upon parallel flat surface.....	14864
far ultraviolet rocket spectrophotometry instrumentation.....	9601
grenade, experiment, temperature, pressure, density, and wind measurements, 1960-63.....	20621
ion, propellant feed systems, research and development.....	13147
jet-plumming interference by computer simulation of measured flight motions of 2 RAM A fourth stages.....	3016
light-weight heat exchanger, new method used to fabricate.....	9554
M405 handling unit procurement, unnecessary costs incurred, Army Dept., GAO report.....	8737
motor cases, filament wound, problems in military applications.....	2265
national altitude test facilities.....	14833
nozzle inserts, refractory materials, thermal shock evaluation.....	13331
nozzles, vapor-deposited tungsten coatings.....	13135
nuclear, orbit-launched vehicles, lunar mission performance evaluation.....	11380
payload, small multi-purpose for ionospheric studies.....	13240
performance for chemically frozen expansion of hydrogen.....	3029
propellant, pump inlet perturbation suppressed by compensating-bellows device.....	16714
propulsion, chemical, nuclear, hearings.....	10346
rocket-grenade experiment system.....	7516
rotating-solid-propellant, application to attitude control of space-vehicle upper stage.....	16689
<b>Saturn—</b>	
excessive costs incurred by NASA in transporting, GAO report.....	8717
static testing, atmospheric acoustics as factor.....	18735
Saturn 1, Block 1 flight test vehicles, aerodynamic analysis.....	7498
Saturn V—	
launch vehicle, proposed versions, aerodynamic characteristics.....	14883
vehicle S-1C stage, pump inlet duct gimbal joint system, kinematic analysis.....	20568
Scout vehicle during 4th-stage reentry, trajectory and large-amplitude motions, analysis.....	13236
smoke trails for wind-shear measurements, evaluation of chemicals.....	20586
solid-propellant, increased costs of ammonium perchlorate, GAO report.....	6769
<b>sound—</b>	
Goddard projects summary.....	13137
launch environment profiles.....	5508

	Entry
<b>Rockets—Continued</b>	
Soviet, nuclear components of cosmic rays, investigations made.....	12986
space, radio communications, USSR study.....	16525
spectrophotometer airglow measurements in far ultraviolet.....	14889
surface blast effects, Waterways Experiment Station research capabilities.....	639
<b>Traillblazer—</b>	
reentry physics research vehicles, description and flight tests.....	11386
simulated meteor reentry, preliminary analysis.....	11400
vehicle for producing artificial meteor, flight test performance and description.....	11401
vehicles, flight tests, results of application of wind compensation method.....	9566
Traillblazer IIb, spectrographic data from reentries.....	14880
two-dimensional gray-gas radiant heat transfer in coaxial flow gaseous reactor.....	7525
unguided, field wind weighting and impact prediction.....	7532
unmanned, Federal aviation regulations.....	6619
vibratory environments, localized, statistical techniques for describing.....	14847
YLR99-RM-1 engine operating experience in X-15 aircraft.....	14809
<b>Rockey, John W., farmstead sewage and refuse disposal.....</b>	22
<b>Rockford, Ill.:</b>	
occupational wage survey.....	16593
population, special census.....	10065
<b>Rockland County, N.Y., population, special census.....</b>	173
<b>Rocks:</b>	
altered wallrocks in central part of Front Range mineral belt, Colo.....	4795
bacteria of layer waters, oils and rocks of oil deposits in USSR.....	2589
bedrock geology of Pen Yan and Keuka Park quadrangles, N.Y.....	12505
bleached rock in Coeur d'Alene district.....	15948
Cambrian, Pioche mining district, Nev.....	19789
Cenozoic sedimentary, Salinas Valley, stratigraphy and structure, study.....	12506
coal bearing rocks, geology and coal resources of Alabama.....	12508
conductivity at high temperatures, USSR study.....	903
crystalline, Shelby quadrangle, N.C., heavy minerals.....	2418
deep earth, new shear apparatus for temperatures of 1,000° C. and pressure of 50 kb.....	1739
deformation apparatus, application of induction heating.....	13631
deformation, bibliography.....	19188
destruction by pulsed water jet, results.....	8993
elastic constants and stress relief cores determined by triaxial method.....	16640
electrical conductivity change with age, USSR study.....	12917
explosion generated, strain pulses, effect of decoupling.....	5481
geochemistry, related soils and vegetation, Yellow Cat area, Utah.....	21351
granitic, sources of mineral constituents in water, Sierra Nevada, Calif. and Nev.....	12513



# INDEX 1964

	Entry		Entry
<b>Rocks—Continued</b>		<b>Rockwell, Julius, jr., electromechanical fishing and counting fence used in Ireland</b>	14267
Hovey Group of northeastern Maine	19779	<b>Rocky Mountain Forest and Range Experiment Station, publications, list</b>	3685
hydrology of volcanic-rock terranes (series)	19783	<b>Rocky Mountain National Park, general information</b>	16771
joint and fracture orientations, analysis for determining stress directions	11320	<b>Rocky Mountain spotted fever, general information</b>	9716
lithologic variations in slope development theory	12509	<b>Rocky Mountain States:</b>	
magnetization, heterogeneous, USSR	10932	annual survey of manufactures, 1962 statistics for States, standard metropolitan areas, and large industrial counties	6032
manufacturing aggregate by nuclear methods, feasibility	17959	coals, Baum jig performance in treating	2992
mean density values, determination by use of penetrating cosmic radiation, USSR study	14445	Labor organizations, reporting, register	16573
metamorphic and igneous rocks—along northwest border zone of Idaho batholith (series)	805, 4784-85	northern area, commercial pole production, 1962	8644
Chichagof and Kruzof Islands, recognition criteria on aerial photographs	6795	<b>Rocky Mountains, central, selected national forest campgrounds, summer recreational use</b>	12480
Precambrian age in Front Range, description	12507	<b>Rocky River, Ohio:</b>	
metamorphism of Belt series in Elk River-Clarkia area, Idaho	4784	engineer report on harbor—departmental edition	17956
mine roof rock behavior resulting from nearby blasts	9501	document edition	17471
modules of elasticity determined by 4 methods	21709	<b>Rodenticides:</b>	
nepheline-containing, piezoelectric effect, USSR study	14467	Federal insecticide, fungicide, and rodenticide act, amend—law	12000
operations Nougat and Storax in situ stresses, Rainier Mesa, Nevada test site	19256	report	4480
Permian, in western phosphate field, geology (series)	15946	notices of judgment	13572
petrochemistry and bedrock, geology of Fitchville quadrangle, Conn	18109	<b>Rodents:</b>	
petrographic study and classification of western phosphate ores	14750	population, large-scale mapping experiment, USSR study	1239
petrologic study of anorthosite and its country rocks northwest of Idaho batholith (series)	805	seed eating, more natural regeneration by controlling	18070
petrology of limestones of Guam	14340	<b>Rodis, Harry G., geology and occurrence of ground water in Lyon County, Minn</b>	818
petrology of Permian rocks of southwestern Montana	15946	<b>Rodriguez, Jose L., relief</b>	2180
phase-equilibrium relations of rock-forming oxides	14343	<b>Rodriguez, Reynaldo F.:</b>	
Philmont country, rocks and landscape of famous New Mexico ranch	10647	basic data on economy of Venezuela	2456
Precambrian, in southern Black Hills (series)	4783	market for U.S. products, Venezuela	14370
Putnam group of eastern Connecticut	19780	<b>Roe, Eugene L., heavy crop of red pine cones yields many thousands of good seeds</b>	6747
reconnaissance petrographic cross section of Idaho batholith in Adams and Valley Counties, Idaho	8760	<b>Roe, R. M., apparatus for study of slag formation, etc</b>	7649
Red Mountain formation, Ala., relation between specific gravity and iron content	4781	<b>Roe:</b>	
stress determinations by flatjack and borehole-deformation methods	9517	caviar and other fish roe products—firms canning caviar and fish roe, list	19728
stress monitoring station developed based on flat slot method	21710	size, comparison with conditions of fish development and fertility, USSR study	746
stresses, in situ, Ruth mining district, Nev	20512	<b>Roed, Vula, relief</b>	4917
systematic analysis of silicates	10633	<b>Roed, Vula, relief</b>	15445, 15668, 17222
weathered crystalline, infiltration and permeability, Georgia Nuclear Laboratory, Dawson County, Ga	8753	<b>Roentgen irradiation, see X-rays.</b>	
see also Bedrock—Carbonatites—Igneous rocks—Sandstone.		<b>Roentgenograms, see X-rays.</b>	
		<b>Roentgenology:</b>	
		anti-ray effect of gallates under conditions of irradiation with 1000 roentgens, USSR study	14615
		Soviet studies	1305
		thoracic examination of unanesthetized primates, restraint apparatus	1749
		see also Mammography.	
		<b>Roethlisberger, Hans, reflection and transmission coefficients at interface ice-solid</b>	14202
		<b>Rogers, Edith Nourse, Memorial Veterans Hospital, see Edith Nourse Rogers Memorial Veterans Hospital.</b>	
		<b>Rogers, Samuel M., digest of State air pollution laws</b>	5651
		<b>Rogers, T. A., caloric cost and fluid and electrolyte balance in simulated subarctic survival situations</b>	19140

# JANUARY-DECEMBER

	Entry
Rogers, William C., jr., testimony, hearings	6526
Rogue River Basin project, Merlín division, construct, Interior Dept. report	6197
Rohl, Gerald E.: fluorescent color specification, Beckman model DK-2 spectrophotometer	5593
luminescent, etc., coatings as night aircraft carrier landing aids	13328
Rolfe, E. A., jr., relief	6229, 12190, 15481, 17237
Rollinski, Andrew J., satellite-tracking characteristics of X-Y mount for data acquisition antennas	13213
Roll, controls applicable to stabilized vehicles	18793
Rollag, Norman L., freezing of commercial bakery products	19086
Rolling elements slip rings for vacuum application	9608
Romans, Peter A., X-ray spectrographic analysis for trace quantities of tantalum in columbium	16634
Romberger, J. A., meristems, growth and development in woody plants, etc.	42
Rome Air Development Center: technical documentary reports	4257, 7996, 20972
technical report	69
Rome Institute for Unification of Private Law, see International (Rome) Institute for Unification of Private Law	
Romer, A. Russell: basic data on economy of Greece	8827
foreign trade regulations of Greece	15986
Romney Federal Credit Union, growth and its contributions to community	6606
Romstad, Karl: evaluating shear strength of plastic laminates reinforced with unwoven glass fibers	18052
investigation of methods for evaluating unwoven glass-fiber-reinforced plastic laminates in flexure	12445
Ronholt, Lael L.: distribution and relative abundance of commercially important pandalid shrimps, northwestern Pacific Ocean	8617
light box for photographing fish and invertebrates at sea	4732
shrimp explorations off Vancouver Island, B.C. by M/V John N. Cobb, Oct.-Nov. 1962	19723
Roof supports, see Mine props	
Roofers, employment outlook	7385
Roofing: asphalt and tar, current industrial reports	3390
summary 1963	8113
building maintenance, Navy manual	7869
built-up, effects of solar heating, radiative cooling, and thermal movement	3053
errata	7581
Roos, G. E., electrothermal engine propellant storage and feed system study	13148
Roosa, Robert V.: remarks	
Dec. 28, 1963	3175
May 21, 1964	13502
Sept. 28, 1964	20860
Oct. 8, 1964	20861
Roosevelt, Franklin D., three wars, FDR as war leader (lecture)	9966

Entry	
Roosevelt, Franklin D., jr.: remarks	
Dec. 4, 1963	1957
Feb. 6, 1964	4414
Mar. 25, 1964	8188
Apr. 6, 1964	8187
Apr. 16, 1964	10132
May 13, 1964	11977
May 25, 1964	11974
May 27, 1964	11976
June 4, 1964	11975
June 9, 1964	13828-829
June 12, 1964	13830
June 18, 1964	13827
Aug. 18, 1964	17163
Aug. 20, 1964	17161
Sept. 9, 1964	17162
Roosevelt, Theodore, acquire Ansley Wilcox House where oath of office was taken, report	2095
Roosevelt, Theodore, Birthplace, National Historic Site, see Theodore Roosevelt Birthplace National Historic Site	
Roosevelt Campobello International Park: establish	
law	13911
reports	12085, 12245
establish as memorial, agreement with Canada	20830
Roosevelt Campobello International Park Commission: establish	
law	13911
reports	12085, 12245
Root rot, damage to white pine at Chittenden Nursery	773
Roots: development, ponderosa pine transplants at Lincoln, Nebr.	14326
yellow birch, development better in humus than sandy loam	780
Rope: Federal item identification guides for supply cataloging	12291
supplements	3472
uses, etc., on farm	20916
Roppel, Alton Y. fur seal investigations, Pribilof Islands, Alaska, 1962	8618
Rosebud County, Mont., geology	8756
Rosebud Reservation: lands, place in trust status	
law	17322
report	12105
tribal land, sale and exchange of isolated tracts	
law	1925
report	499
Rosebud Sioux Tribe, see Sioux Indians	
Rosen, Alan, Explorer VI and Pioneer V data	1448
Rosen, B. Walter, mechanical properties of fibrous composites	11352
Rosen, M. Seymour, higher education in Poland, rules of admissions, etc.	14187
Rosenberg, N. W.: ionospheric temperatures obtained from photography of shock waves	20963
observations of ionospheric wind patterns through night	20962
Project Firefly, 1962-63	13630
Rosenberg, Nathan, acceptability of mouth protectors by high school football players	7687
Rosenberg, S. D., catalytic reduction of carbon monoxide with hydrogen	14773

# INDEX 1964

Entry	Entry
Rosenstein, Marvin, analytical quality control service of Division of Radiological Health, interlaboratory study of iodine-131 surveillance measurements in milk-----	20743
Rosenthal, Elaine P., outdoor recreation, current periodicals-----	19818
Rosenzweig, Walter, energy loss of 5.8 Mev alpha particles passing through absorber of variable thickness-----	8065
Roses, varieties for the home, classification, culture, etc-----	9943
Rosettes, <i>see</i> Medal of Honor.	
Rosin, <i>see</i> Naval stores.	
Ross, Clyde P., Belt series in Montana-----	4786
Ross, David W., interference properties of photons-----	4230
Ross, Jack S., grain and feed statistics, supplement for 1963-----	7946
Ross, John E., effects of gin drying and cleaning of cotton-----	13589
Ross, Malcolm, crystal chemistry of beryllium-----	6809
Ross, Roger A., relief-----	12033, 15633, 17176
Ross, W. M., grain sorghum, culture and utilization-----	9936
Rossa, Leonard G., parametric study of constant thrust, electrically propelled Mars and Venus orbiting probes-----	21755
Rossmann, Audrey, relief-----	8271, 13861
Rosrow, Vernon J., one-dimensional free-surface waves on liquid metals interaction with transverse magnetic field-----	13249
Rosters, <i>see</i> names of departments, etc., issuing rosters.	
Rostoker, William, deterioration of aluminum alloys in presence of mercury and cesium-----	7470
Rostow, W. W.: addresses----- Nov. 20, 1963----- June 24, 1964-----	7761 15259
Roswell Basin, ground water, artificial recharge-----	19805
Rot:	
postharvest bacterial soft rot, bell peppers, hot water treatments and hydrocooling, effect-----	11735
white trunk rot of hardwoods-----	18045
<i>see also</i> name of rot.	
Rotary, deployable space power supply-----	21734
Rotating machinery for gas-cooled reactor application, proceedings of meeting-----	13715
Rotation:	
cats, caloric nystagmus following rotary habituation-----	4315
device transmits rotary motion through hermetically sealed wall-----	11369
Rotation of crops, cropping system studies on Cecil soil, Watkinsville, Ga., 1943-62-----	11741
ROTC, <i>see</i> Reserve Officers Training Corps, Air Force—Reserve Officers Training Corps, Army—Reserve Officers Training Corps, Navy.	
Roterus, Victor: addresses, etc----- Feb. 19, 1964----- April 9, 1964-----	8013 8013
Roth, Emanuel M.: space-cabin atmospheres— fire and blast hazards----- oxygen toxicity-----	11358 20536
Roth, Susanne, <i>see</i> Grun, Susanne.	
Rothberg, Herman J., labor and material requirements for private one-family house construction-----	14703
Rotor planes, <i>see</i> Helicopters.	
Rotorcraft, external-load operations, Federal aviation regulations-----	6620
Rotors:	
axial-flow-pump— blade-element performance----- design and performance----- helicopter, nonarticulated, full-scale wind tunnel tests----- high speed rigid rotor systems, elastic coupling phenomena----- lifting, wind-tunnel measurements at high thrust coefficients and high tip-speed ratios----- superconducting, magnetically supported spinning body, theoretical and experimental study-----	18790 11415 16703 18999 18785 20529
Rough, Robert L., hydraulic fracture treatments in Glade and Clarendon oil reservoirs-----	14753
Roughage, <i>see</i> Food for livestock.	
Rounsefell, George A., Biological Laboratory, Galveston, Tex-----	10553
Rovelstad, Trygve A., relief-----	15472
Row, Clark, determining forest investment rates-of-return by electronic computer-----	8694
Rowlett, Frank B., relief-----	15478, 17703, 21115
Rowley, Paul D., resonant interaction of vertically polarized plane electromagnetic waves with thin slabs of plasma-----	20602
Roys, G. P., penetrations of thunderstorms by aircraft flying at supersonic speeds-----	11705
RSFSR, <i>see</i> Russian Soviet Federated Socialist Republic.	
RTA-60 page teletype, USSR-----	9110
RTD, <i>see</i> Research and Technology Division.	
Rubber:	
industry reports-----	3317
supply and distribution for U.S.— current industrial reports----- summary for 1963-----	3390 10058
synthetic— Attorney General's report of competition in synthetic rubber industry----- specification limits, sampling and testing, Federal standard-----	5416 18606 12408
Rubberweed, livestock poisoning in Western States, reducing losses-----	20915
Ruben, George, deferred increases due in 1964 and wage escalation-----	5448
Rubeola, <i>see</i> Measles.	
Rubidium, vapor, frequency standard, portable-----	11439
Rubles:	
crystals, X-ray topography----- dislocation structures in single-crystal Al <sub>2</sub> O <sub>3</sub> ----- optical tests on samples-----	9682 19173 13346
Rubin, Sherwin, sensitivity indices for Hall generators-----	7582
Ruby, J. D., elastomers for potential use at cryogenic temperatures-----	15017
Rudd, Benjamin W., decisions of United States courts involving copyrights, 1961-62-----	549
Rudd, Kenneth D., horizontal tooth mobility-----	8005
Rudd, Velva E., genus <i>Dussia</i> (Leguminosae)-----	1512
Rudman, Herbert C., structure and decision-making in Soviet education-----	6581
Rudman, P. S., local order and solid-solution strengthening in columbium alloys-----	4226

	Entry		Entry
Ruggeri, Robert S., cavitation, etc., of nitrogen in tunnel venturi...	7510	Rumania—Continued	
Rugs:		higher education—	
braided, industry, trade practice rules	14261	current problems	8951
current industrial reports	15311	in field of health	16080
wilton, brussels, etc., Tariff Commission report	18996	rich content of ideas	5358
Ruhlin, Charles L., flutter studies of sweptback T-tail of multijet cargo plane	9583	hygiene and labor protection, prospects for development	9334
Rules, see names of courts, commissions, etc., issuing rules—also subjects.		index-digest of decisions, 1949-52	19745
Rules and Administration Committee, Senate:		industrialization and structural changes in economy	21530
calendar	3675	inframicrobiology, new success	6970
committee print	10440	Institute for State Control of Drugs and Pharmaceutical Research, research activities	11010
hearings	4594, 6526, 8456, 10438, 12281-282, 14156, 15822-824	Institute of Atomic Physics of Rumanian Academy, report	1092
investigations and studies—		Institute of Nuclear Physics, report	18524
financial or business interests of former employees, etc., rules of procedure	10439	legal journals, abstracts	941,
privileges and elections, expenses, report	6459	1193, 2685, 4893, 5261, 5404, 7181, 10831, 11159, 12937, 16091, 16270, 18497, 19940, 20164.	
jurisdiction to investigate violation of rules of Senate, report	14082	livestock and meat production improvement, review of government decrees	935
reports	455,	medical conferences to be held in 1964, etc.	7073
470, 2197-99, 2200-3, 2223, 4534-35, 4537-39, 4552-64, 6442-61, 6471, 8421-32, 10394-396, 14075, 14082, 14104, 15680-693, 15761-762, 17706, 17726, 17801-803, 17806-823, 17859, 19573-577.		new plant varieties created	16032
Rules Committee, House:		petroleum and gas extractive industries research results	21502
hearings	4507, 14017	Phthiology Institute, general information	12807
reports	330,	physiological research during 15 years of Republic, translation, progress in microbiological research	936
336, 349-350, 378, 2047-48, 2072-74, 2086, 2098, 4479, 4483, 6277-79, 6289-90, 6300-2, 6320, 8289, 8303, 8323, 8340-42, 10208, 10222, 10235-236, 10247-248, 10256, 10267, 10281, 12045-46, 12056-58, 12061, 12063-66, 12075, 12087-90, 12100-103, 13929, 13952, 13959-960, 13971, 13978, 15483, 15486, 15500, 15506, 15522-523, 15525, 15539, 15544-547, 15563-565, 17539-544, 17550, 17573-577, 17607-612, 19454-455, 19459-461, 19484-486, 19489.		provincial press, summaries	958,
Rum, denatured, distribution and use, code of Federal regulations	12549	1073, 1187, 1209, 2497, 2735, 2904, 4993, 5240, 5281, 6911, 7044, 7142, 8967, 9020, 9099, 9239, 9343, 10799, 10924, 11002, 11136, 11201, 12629, 12750, 12868, 12984, 14496, 14568, 14642, 16048, 16139, 16209, 16344, 16418, 18234, 18302, 18393, 18553, 19835, 19917, 20088, 20263, 20362, 21451.	
Rum War at sea	10122	research, basic and applied	990
Rumania:		Research Institute for Grains and Industrial Crops activities	9124
Academy of Sciences, achievements in 1963 and plan for 1964	9321	school of mathematics	14477
Academy surveys scientific achievements, 1944-64	21547	scientific research—	
achievements in geological research in hydrocarbons	21464	evaluation of effectiveness	2914
agricultural research	20233	in agriculture	21399
agricultural science, advances	10904	in animal husbandry and poultry raising	14556
agricultural science in full development	18236	technical and scientific research, new aspects in statistical characterization, study	11009
Black Sea littoral, Constanta, hydraulic-engineering problems, symposium	8859	Rumanian People's Republic, see Rumania.	
creation and judicious use of drug supplies	2800	Rummier, Donald R., oxidation-resistant coatings on Mo-0.5Ti alloy sheet at 2,500° F	18733
Dr. I. Cantacuzino Institute of Microbiology, Parasitology, and Epidemiology, activities	16016	Runoff:	
economy, basic data	18183	Diltdown Watershed, calibrating by using climatic data	8679
education	10461	plot, inexpensive type, construction and installation	782
education of youth in armed forces	21521	yearly variations for conterminous United States, 1931-60	2433
electrotechnical industry, translations	19841	Runways (aeronautics):	
foodstuffs industry, development under 6 year plan, 1959-65	5190	airfield moisture content investigation	4671
geological research	9217	roughness, response of jet trainer aircraft	11390
		Selfridge Air Force Base, facilities deterioration—	
		hearings	12120
		report	21201
		unevenness, effect on dynamic response of supersonic transports	21732



# INDEX 1964

	Entry		Entry
Ruppert, John A.:		Rural Electrification Administration—Continued	
recovery of zinc from galvanizers' dross and zinc-base die-cast scrap by filtration	11323	policy concerning general fund levies as related to advances and accelerated payments	18933
tin recovery from hardhead by filtration	20505	REA and its borrowers, report published in Reader's Digest, Dec. 1963, article, matter of record	9750
Rural Areas Development Office, Agriculture Dept., appropriations, 1965, hearings	10286	REA borrowers—	
Rural communities:		electrification systems, list of materials acceptable	16852
area development—		supplements	7723
ideas	5851	telephone systems, list of materials acceptable	11596
recreation in small watershed projects	5853	supplement	3683
civil defense, knowledge for survival, newsletter to extension program leaders	3633	REA bulletins	3122-23, 5676, 7721, 9751-52, 18933
cooperation among local governments, bibliography	5841	recreation loan policy, hearing	387
expenditures and income, 1961, rural nonfarm areas in—		statistical bulletin, monthly	3748-49
northeastern region	18626	statistical report—	
southern region	18627	1962	5675
United States	16586	1963	16851
western region	14687	rural telephone borrowers—	
growth and new economic opportunity (address)	1689	1962	3121
hospitals for rural people	26	1963	18931
housing for elderly, insured loan program, extend—		telephone system, construction contract	13435
law	13889	Rural families, <i>see</i> Families.	
reports	12091, 14058	Rural housing, <i>see</i> Housing.	
housing for senior citizens	10503	Rural mail carriers, <i>see</i> Mail carriers.	
protecting rural population against radioactive contamination, USSR pamphlet	21517	Rural recreation enterprises in New England	17901
rural areas development—		Rural redevelopment:	
and land use (talk)	3137	area redevelopment, approved projects, directory	5925
at work	16965	attacking rural poverty (address)	5820
in United States (talk)	1719	OEDP status report	5929
suggestions for ASCS committeemen	0962	RAD program (address)	5811
type of place, demographic, etc. data for States by farm and nonfarm residence, census of population, 1960	17114	redevelopment (periodical)	5930
Rural county cares for its aging, story of Aitkin County, Minn.	17117	resource conservation and rural areas development (remarks)	1717
Rural development program:		resources and rebirth of rural America (address)	1718
cooperatives as contributors to RAD (address)	5804	rural areas development program (address)	5803
goals and accomplishments (remarks)	5824	value of prime contracts awarded in ARA redevelopment areas, 1963	9096
growth and new economic opportunity in rural communities (address)	1689	Rural telephone program, <i>see</i> Telephone.	
ideas, progress and profit in Lincoln Hills	5851	Rural workers, <i>see</i> Farm labor.	
international contribution of American agriculture (address)	16949	Rusk, Dean:	
newsletter	3997	addresses—	
opportunities for youth (address)	1690	Oct. 27, 1963	5698
outdoor recreation projects, role of Agriculture Department (address)	16942	Jan. 10, 1964	7772
recreation in small watershed projects	5853	Feb. 16, 1964	9805
rural areas development at work	16965	Feb. 25, 1964	9806
Rural electricity, <i>see</i> Electricity.		Apr. 7, 1964	13465
Rural electrification, <i>see</i> Electricity.		Apr. 25, 1964	13466
Rural Electrification Administration:		making of foreign policy (inter-view)	9796
accounting records, REA borrowers, audit	3122	Russel, John H.:	
appropriations, 1965, Agriculture Dept., hearings	10286, 15790	case studies in liberal arts college, academic administration	4616
distribution line extension, construction contract	7722	financing undergraduate education	8485
energy purchased by REA borrowers, 1963	9751	Russell, Clarence C., and wife, relief	17691
Federal expenditures under electric loan program, possibilities for reducing, GAO report	2403	Russell, D. L., rocket booster control, penalty functions and bounded phase coordinate control	13152
financing, hearing	15578	Russell, Harold:	
		remarks—	
		July 13, 1964	14684
		Oct. 7, 1964	18619
		Russell, Sargent, producer delivery patterns in New England milk markets	16958
		Russell County, Va.:	
		coal, carbonizing properties	5496
		coal, preparation characteristics	5488
		development opportunities, suggestions for improvement	18659

# JANUARY-DECEMBER

	Entry
Russia, scientific expedition to Brazil, forgotten records of Langsdorf Expedition in 1820's	7302
see also Union of Soviet Socialist Republics	
Russian accessions, L.C. monthly index	3738
Russian language:	
applicational generative model and transformational calculus	20169
guides, central USSR, Air Force pamphlet	7978
texts, automatic analysis, USSR study	16527
Russian Orthodox Church, contact with West	11238
Russian Soviet Federated Socialist Republic:	
central regions, helminthiasis morbidity rate and control measures	9159
confirmation of various laws by Supreme Soviet RSFSR	20120
farm equipment problems	1194
medical aid in RSFSR	9063
public health—	
agencies, 1964, statistics	21590
improvement	20270
measures, improvement, report	20049
organs and institutions, principal indicators of increase in medical personnel	2639
service in Russian Federation, studies	20203
water supply problems	16039
Rusts (plant diseases), see Broom rust—Stem rust—White pine blister rust	
Ruth mining district, Nev., in situ rock stresses	20512
Rutile, traveling wave maser	20613
Rutter, William J., metabolic control mechanisms in animal cells	13284
Ryan, J. Donald, geology of Edgemont quadrangle, Fall River County, S. Dak.	21348
Ryan, J. P.:	
gold	21689
silver	21720
Ryan, Margaret F., communications and electronics bibliography	1741
Ryan, Stephen O., spruce budworm defoliation in northeastern Minnesota decreases in 1963	12457
Rybnoye khozyaystvo (periodical): translations	16521
Rydberg absorption series of N <sub>2</sub>	17004
Rye:	
crop production, 1963	7802
futures—	
commitments of traders	3344
trading and open contracts	3550
stem rust spread by barberry bushes	9958
Rygg, G. L., biphenyl control of citrus spoilage	7930
Ryukyu Islands:	
appropriations, 1964—	
hearings	2229
law	1985
reports	2069, 2099, 2108, 2220, 12045
appropriations, 1965—	
hearings	12117, 19588
law	21126
reports	13950, 13952, 19582
civil affairs statistics	5779
economic cooperation between United States and Japan, agreement	16880
economy, basic data	864
Eocene algae from Ishigaki-shima	21353
Eocene microfossils from Ishigaki-shima	18128

	Entry
Ryukyu Islands—Continued	
facts book	5780
supplement	5779
geology and paleontology of Ishigaki-shima (series)	18128, 21353
labor conditions	11289
S	
S.A.M., see School of Aerospace Medicine	
S.C.S., see Soil Conservation Service	
S.D. series	3999
S.E.C., see Securities and Exchange Commission	
S-IV vehicles, see Spacecraft	
S.R.D.S., see Systems Research and Development Service, FAA	
S.R. series	4000
SA-TR series	11527
Sabella, Kenneth J., testimony, hearings	6526
Saben, Samuel, geographic mobility and employment status, Mar. 1962-Mar. 1963	21677
Sablo, Barbara C., relief	8262
Sacramento, Calif.:	
port, harbor conditions, etc.	10493
principal electric facilities, map	677
real property acquisition practices and adequacy of compensation, hearings	15603
Sacramento River, winter-run Chinook salmon	8619
Sadoff, Melvin, high sustained acceleration effects on pilots' performance and dynamic response	14843
Safe Harbor, Pa., principal electric facilities, map	673
Safety belts, see Automobile seat belts	
Safety Bureau, report BOSR (series)	15335
Safety equipment and appliances:	
Federal item identification guides for supply cataloging	12291
supplements	3472
see also names of special equipment or appliances	
Safety helmets, see Helmets	
Safety of life:	
air safety—	
aerospace maintenance safety	3216
aerospace safety (periodical)	3217
CAB charged with safety promotion, accident prevention, etc. (remarks)	19317
crash impact configurations, structural analysis	16593
emergency procedures over water	3240
human factors aspect of light-plane safety	18737
naval aviation safety review	3260
AMC safety manual	15262
atomic energy program—	
AEC public safety programs in atomic energy	10038
atomic power safety, general information	17068
nuclear accident contamination control	11835
nuclear safety, review of recent developments	3804
radioactive materials, handling	9633
radioactive materials, transportation	11855
radioactive substances, laboratory use, safety requirements, USSR studies	18266
reactor safety, literature search, shipments of radioactive material, summary of incidents, 1962	1778
SL-1 nuclear reactor excursion, final report	1771
standard health and safety requirements, ID manual	5964

# INDEX 1964

Entry	Entry
<b>Safety of life—Continued</b>	<b>Safety of life—Continued</b>
atomic energy program—continued	public safety radio services, FCC
test reactor operating and safety	rules and regulations..... 8534
experience, study..... 5963	publications, price list..... 18390
buildings, dangerous or unsafe, re-	radiation accidents due to equip-
moval, District of Columbia,	ment damage or breakdown, or-
amend act—	ganization of medical counter-
law..... 17345	measures against, East Ger-
report..... 17715	man study..... 18324
Bureau of Safety pamphlet BOSP	records as tools for safety action
series..... 202	(remarks)..... 14679
community's interest in health and	refrigerators, devices for doors,
safety of health workers (re-	progress, hearing..... 4500
marks)..... 14672	rescue skills and techniques..... 4371
comparison of State codes with	residential chimneys and fireplaces,
ASA, charts—	literature search..... 3044
excavations..... 2947	safe use of pesticides in home and
fixed ladders..... 5420	garden..... 11777
portable metal ladders..... 7368	safety and fire protection bulletin,
portable wood ladders..... 20430	VA..... 5743, 9866, 20869
competitions, National Crushed	safety and special radio services,
Stone Association, 1962..... 1397	FAA applications and actions..... 3464
construction safety, metropolitan	safety digest, AMC pamphlets..... 4279,
area, pattern for program (re-	5939, 10000, 13669, 19201
marks)..... 13036	safety record..... 4001
consumer information, price list..... 21842	safety review..... 4002
effects of automation and techno-	safety standards..... 4003
logical change, abstracts..... 7358	safety training for supervisors..... 1364
farmers' checklist for pesticide	State school laws and regulations..... 17924
safety..... 15219	tornado safety rules..... 15164
fire safety training..... 6793	traffic safety—
flammable liquids and gases, safe	alcohol and its effects..... 5532
use and storage on farm..... 9942	highway safety for other 80
handling flammable and combus-	percent (remarks)..... 9739
tible liquids, manual..... 10118	interstate compacts, consent of
how-to-lift model, school shop pro-	Congress to permit District
ject..... 5421	of Columbia to join—
Industrial safety—	law..... 17325
design considerations for layout	report..... 12228
of facilities, placement of	Kentucky program on medical
equipment, and production	aspects of driver limitation..... 20760
processes (remarks)..... 14682	unit safety management, Army
protection against chemical agents	pamphlet..... 20999
and radiation, USSR studies..... 2522	use of respiratory protective equip-
safety in industry, environmental	ment in emergency rescue or
and chemical hazards se-	recovery operations in pres-
ries..... 5419, 18614	saturated tunnels, etc..... 18706
Kaiser Steel Corp., Fontana, Calif.,	weather and flight safety, USSR
accident records program (re-	study..... 20053
marks)..... 14680	why are booms dropped?..... 1365
lasers, biological effects, safety re-	work of radiology groups at sani-
commendations..... 20702	tation and epidemiological
longshore and ship repair industries	control stations, USSR..... 9089
safety program, maritime safe-	X-ray and sealed gamma-ray
ty report, 1963..... 5422	sources, standard..... 7574
maritime safety data for ship-	Safety officers, career opportunities,
yards..... 18615-616	Army Department and other
maritime safety digest (periodi-	Federal agencies..... 8162, 19328
cal)..... 3708	Safety pins, Tariff Commission re-
mine safety—	port..... 5719
coal-mining industry, safety or-	Saffel, Dorothy M., labor offices in
ganization and activities of	United States and Canada..... 9375
award-winning companies..... 16625	Sagamore Hill National Historic Site,
coal mining injury experience,	general information..... 14977
analysis..... 2983, 20477	Saginaw, Mich.:
electrical equipment, installing	Michigan National Bank to operate
and using..... 20476	and establish branch offices,
Federal coal mine safety act,	hearing..... 19593
amendments—	services for senior citizens, hear-
hearings..... 6351	ings..... 12249
report..... 4457	Sahara:
national safety competition, 1962..... 16627	Algerian region, information..... 12709
rigid foam to increase safety..... 7445	Spanish, description..... 2724
motor vehicles, Govt. passenger	Sahni, Roop C., electronic state of
carrying, establish standards—	diatomic molecules..... 14890
law..... 17374	Sailing directions:
report..... 17750	Aden, Gulf of..... 11477
National Farm Safety Week..... 9956	Africa—
Navy safety precautions, change..... 3076	southeast coast..... 1522
occupational safety and health,	southwest coast..... 16777
State law, suggested lan-	Australia—
guage..... 13039-40	north and west coasts..... 18842
occupational safety legislation,	southeast coast..... 7634
States, summary..... 11263, 14674	Baffin and Davis Strait..... 9673
pleasure craft, safety sug-	Baltic Sea..... 16775
gestions..... 6113	

# JANUARY-DECEMBER

	Entry
Sailing directions—Continued	
Bengal, Bay of	20673
Biscay, Bay of	18838
British Columbia	18836
Canada, northern	7628
China, coast	5577
England, east coast	5575
England, south coast	20671
France, north coast	7631
Greenland, east	20669
Iceland	20669
Indian Ocean, south	5576
Ireland	20670
Japan	13309, 18843
Java, Lesser Sundas, south, southeast, and east coasts of	
Borneo, and Celebes	18841
Kattegat and Sound	11476
Mediterranean Sea	1521, 7632, 18840
New Zealand	7635
Norway, northwest and north coasts	18839
Nova Scotia	7627
Pacific Islands	3072, 16778
Philippines	3073
Red Sea	11477
St. Lawrence, Gulf and River	18837
Scotland, west coast	20672
Skagerrak, northern and eastern shores	1519
South America	7630, 16774
USSR, northern	1520, 3071, 16776
West Indies, etc.	5574, 7629
Sailor Creek, ground-water reconnaissance of area	15944
Sailors:	
application of fair labor standards act to seamen	11679
civil relief act, text	21215
Yugoslav sailor's 6 years in Chinese prison	20272
Sailplanes, see Gliders (aircraft).	
Sainsbury, Cleo L., geology of Lost River mine area, Alaska	8752
St. Clair, Hillary W., thermochemical model for iron blast furnace	7454
St. Croix, V. I., ground water for public supply	820
St. Croix River, Maine to Little River, N.C., light list	4408
St. Elizabeths Hospital, D.C.: commitment of persons of unsound mind found on Federal reservations in Loudoun County, Va.—	
law	17364
report	17742
final report of Advisory group on future of	12531
St. Elizabeths Hospital Improvement Commission, see Improvement of St. Elizabeths Hospital Commission.	
St. Francis Levee District, Ark.; relief	15510, 17232, 17739
Saint-Gaudens National Historic Site: establish—	
law	17402
report	17776
St. Helens, Mount, recreation guide	2372
St. John, Gerald, relief	17500
Saint John River: upper, hydroelectric power development, authorize—	
hearing	17890
hearing, appendix material	17889
St. Johnsbury, Vt.: District Court term to be held—	
law	12007
report	10240
St. Kitts, plant import requirements	13573
St. Laurent, Louis S.E., relief	17504
St. Lawrence County, N.Y., ore deposits of magnetite district, northwest Adirondacks, N.Y.	15947

	Entry
St. Lawrence Gulf, sailing directions, change	18837
St. Lawrence River and Valley: pilotage services, agreement with Canada	3162
sailing directions, change	18837
seaway—	
navigation all year, study, hearings	2123
oil pollution, cooperative arrangements to reduce—	
hearings	17663
reports	10221, 15704
reimposition of tolls on Welland Canal, agreement with Canada	9811
tariff of tolls, agreement with Canada	18971
traffic report, 1963	9753
transportation study, hearings	17873-17874
Welland Canal, suspension of tolls, agreement with Canada—	
surface water records of basin, Oct. 1950-Sept. 1960	18143
St. Lawrence Seaway, see St. Lawrence River and Valley.	
St. Lawrence Seaway Development Corporation:	
appropriations, 1964, public works—	
law	1984
reports	343, 510, 4458
appropriations, 1965—	
hearings	12119
law	17370
reports	12098, 15767, 17572
audit report, 1962	6760, 10166
press releases	3922
report, 1963—	
departmental edition	18934
document edition	17460
traffic report of St. Lawrence Seaway, 1963	9753
St. Louis, Mo.:	
income, education, and unemployment	2968
occupational wage survey	7410
principal electric facilities, map	675
200th anniversary of founding, commemorative medals—	
law	6181
reports	2096, 4550
St. Louis Bicentennial Corp.: medals commemorating 200th anniversary of founding of St. Louis, Mo., furnish—	
law	6181
reports	2096, 4550
St. Louis River:	
dam, construction—	
hearings	17663
law	13872
reports	10200, 12191
Saint Lucia:	
Beane Field Airport, use, agreement with Great Britain	20837
plant quarantine import requirements	19059
United States defense areas, agreement	21882
St. Marys County, Md., land conveyance to Lexington Park Volunteer Fire Department, Inc.	4524, 6140
St. Marys River, lock at Sault Ste. Marie, Mich., designate John A. Blatnik Lock, report	8346
St. Paul, Minn.:	
lands conveyed to, released reservations—	
law	17257
report	14112
occupational wage survey	11280
principal electric facilities, map	675
wholesale fruit and vegetable markets, organization	5838



# INDEX 1964

	Entry
St. Thomas Island, leasing of naval properties, hearings-----	4588
Sakhalin fishermen initiate socialist competition to increase fish catches, USSR-----	7070
Salad dressing: and related products, 1963-----	
BDSA report-----	17070
current industrial reports-----	17100
Salaries:	
Capitol Police, longevity benefits, preserve, report-----	17508
checks drawn in favor of banks, etc., for credit of Federal employees' accounts, authorize, hearing-----	19508
college and university administrative and faculty, changes from 1960-61 to 1962-63-----	573
college and university faculty, 1963-64, preliminary report-----	2278
dealers and gasoline service stations employees, 1962-----	11275
District of Columbia-----	
firemen, increase-----	
law-----	17433
reports-----	15569, 17613, 17716
Government, officers, increase, hearing-----	8374
police, increase-----	
law-----	17433
reports-----	15569, 17613, 17716
public school educational employees, increase partial pay-----	
law-----	17331
report-----	17714
retired judges, increase retirement pay, report-----	15572
teachers and Education Board employees, increase-----	
law-----	17433
reports-----	15568, 17613, 17716
dual compensation-dual employment laws, modernize-----	
law-----	17307
reports-----	331, 6279, 6485
statement of purpose, etc-----	12152
employee earnings-----	
miscellaneous retail stores, June 1962 retail stores and proprietary stores-----	14693
retail building materials, hardware, and farm equipment dealers, 1962-----	7398
retail food stores, 1962-----	9456
Federal agencies, principles and procedures, GAO guidance manuals-----	792-793, 2399
Federal, report of advisory panel-----	2119
Government officials and employees-----	
adjust rates of basic compensation-----	
hearings-----	12279
law-----	17285
reports-----	340, 6320, 10259, 12058, 14071, 15522, 15537,
statement of purpose, analysis, etc-----	2120
back pay act of 1963, hearing-----	6520
bimonthly statistics-----	3211
classification laws, compilation-----	21160
increasing, letter from the President-----	8250
rate for positions under general schedule, examination announcements, amdt-----	4389, 15357
review of acceptable level of competence and quality increase features of Federal salary reform act of 1962-----	10341

	Entry
Salaries--Continued	
Government Printing Office, allotment and assignment of pay to cover union dues and State income tax, extend act to cover-----	10334
hearing-----	12081
higher education teaching faculty, 1962-63-----	6575
Hungarian scientific personnel, regulations-----	12762
land-grant colleges and State universities, 1963-64-----	14195
National Zoological Park police, amend act, hearing-----	12282
postal service employees, personnel handbook-----	3854
scientists and engineers, 1948-62-----	6123
State-----	
equal pay legislation, inventory-----	20885
salary ranges of positions in employment security, etc-----	10667, 19807
structure characteristics in large firms, 1963-----	16612
Supreme Court clerk, payment by marshal-----	
hearings-----	8455
law-----	8218
report-----	6480
United States employees, jurisdiction of district courts over actions to recover-----	
law-----	17378
reports-----	15501, 17734
white-collar workers, Hawaii, Puerto Rico, and Alaska, May-June 1963-----	7415
see also Cost of living allowances--Wages.	
Salazar, Antonio de Oliveira, succession to-----	10991
Salem, Mass.:	
Narbonne House, acquisition-----	
law-----	1928
report-----	486
Salem National Historic Site: administer 17th-century Narbonne House-----	
law-----	1928
report-----	486
Salem quadrangle, Mass., bedrock geology-----	10631
Sales:	
Agricultural Stabilization and Conservation Service reports-----	4006
department stores-----	
annual, distribution by months-----	8584
distribution by departments-----	8583
indexes, without seasonal adjustment-----	8581
monthly reports-----	3735-36
selected cities and areas, weekly percentage changes-----	4150
stocks-sales ratios-----	8583
weekly index-----	4149
large corporations-----	4005
making sales figures talk-----	5683
management for manufacturers, bibliography-----	9767
new products, bibliography-----	5688
profitable, U.S. trade centers overseas-----	15988
retail stores, produce sales area arrangement-----	15213
water and sewer bond, 1963-----	16847
see also names of commodities, etc.	
Sales finance companies, see Finance companies.	
Sales tax:	
District of Columbia-----	
exempt House of Representatives majority and minority rooms, report-----	17619

# JANUARY-DECEMBER

	Entry
Sales tax—Continued	
District of Columbia—Continued	
exempt Washington Terminal	
Co.—	
law	17422
reports	15495, 17750
Salesmen and salesmanship:	
Netherlands, what can you sell—	21075
salesmen, retail stores, wholesale	
trade, manufacturing, employ-	
ment outlook—	9417
selling around world, how Com-	
merce helps—	19364
selling in—	
Iran	18182
Pakistan	21088
Switzerland	21082
Turkey	21072
United Arab Republic—	6852
Salinas River and Valley, Cenozoic	
sedimentary rocks, stratigraphy	
and structure, study—	12506
Saline River:	
and tributaries, flood control, en-	
gineer report—	14209
departmental edition—	13924
document edition—	
chemical quality of surface waters	
and sedimentation in basin—	4810
Saline water, see Water.	
Saline Water Office:	
press release—	3923
report, 1963—	8797
scientific and technical activities	
sponsored, bibliography—	847
Sallinger, Pierre:	
appointment as Senator—	
hearing—	15822
report—	17726
Salinity:	
natural sources in Brazos River,	
Tex—	19793
report on land and water develop-	
ment in Indus Plain—	21837
soil, diagnosing—	1697
Salisbury, J. W., bibliography of lunar	
and planetary research—	5872
Saliva, human whole, reductase ac-	
tivity as related to dental	
caries experience—	11808
Salle, Kenneth H., soil survey, Kearny	
County, Kans—	7745
Salmon, Stephen R., specifications for	
Library of Congress microfilm-	
ing—	16618
Salmon:	
fall Chinook salmon, factors influ-	
encing return to Spring Creek	
Hatchery—	4742
firms canning, list—	737
king, stream hydrology related to	
optimum discharge for spawn-	
ing in northern California	
Coast Ranges—	14357
Pacific, chemiluminescence of lipids	
and rate of growth, USSR	
study—	4977
Pacific pink, <i>Oncorhynchus gor-</i>	
busha Walbaum, age and census	
dynamics, USSR study—	1037
pink, success of spawning relative	
to size of spawning bed mate-	
rials—	10572
protein and calorie levels of meat-	
meal, vitamin-supplemented	
diets, feeding studies—	8623
red, runs in Nushagak district,	
Bristol Bay, Alaska, 1946-59,	
statistical records and com-	
putations—	19737
red, segregation in escapements to	
Kvichak River system in Ala-	
ska—	10573

	Entry
Salmon—Continued	
sockeye and related limnological and	
climatological investigations,	
Brooks Lake, Alaska, 1957,	
ecological studies—	21318
spring Chinook salmon transplanta-	
tion study, 1955-61, progress	
report—	2341
winter-run Chinook salmon in	
Sacramento River, Calif., with	
notes on water temperature	
requirements at spawning—	8619
Salmonella, ultrasonics alteration,	
USSR articles—	10845
Salmonidae, bacterial kidney disease	
of salmonid fishes—	10567
see also Whitefish.	
Salmons, Ruth M., list of American	
agricultural books—	1489
Salsbury, Melford H., marketing ores	
and concentrates of gold, silver	
copper, lead, and zinc in U.S.—	13105
carbonate impurity in surface re-	
gion of sodium chloride cry-	
stals—	18762
cortical regulation of water and	
electrolyte balance, USSR	
study—	2891
crystals, visible radiation damage	
effects of alpha particles—	13243
etchants and techniques used to pro-	
duce dislocation etch pits,	
evaluation—	13242
hot-salt stress-corrosion cracking of	
titanium alloys—	21730
in water desalination processes,	
concentration at phase bound-	
aries—	10678
minerals yearbook chapter—	20513
surface topography of crystals—	11404
Salt Creek, sedimentation and chem-	
ical quality of water in basin—	822
Salt Croton Creek, salinity in basin—	19793
Salt Lake City, Utah:	
accident—	14405
convey land to Board of Educa-	
tion—	
hearing—	12123
law—	17259
reports—	13944, 14115
occupational wage survey—	9461
Salt River and Valley:	
summary of snow survey measure-	
ments, 1938-64—	18955
water supply outlook and snow sur-	
veys—	4137
Salt River Pima-Maricopa Indian	
Community, see Pima Indians.	
Salt water, see Sea water.	
Saltbush, fourwing, seedling test in	
western New Mexico—	2380
Saltonstall-Kennedy act, see Fish and	
fisheries.	
Salts:	
injury to ornamental shrubs in	
West, reducing—	7921
inorganic, using as high-tempera-	
ture lubricant, investigation—	9989
molten, physical chemistry, proceed-	
ings of all-Union conferences—	5954
molten, regenerative, molten-salt,	
thermoelectric fuel cell—	18768
Saltzman, Edwin J., base pressure co-	
efficients obtained from X-15	
airplane for Mach numbers up	
to 6—	18752
Salutes (military), see Military cere-	
monies, honor and salutes.	
Salutsky, Murrell L., mineral hy-	
products from sea—	10675
Salvador, Martin M., relief—	10369
Salvador, economy, basic data—	4856
Salvelinus namaycush, see Trout.	
Salvucci, Lucia, relief—	15430

# INDEX 1964

	Entry		Entry
Saly, Harold A., relief.....	6245	Sanders, Ivan L., bulldoze or disk to regenerate shortleaf pine in Kentucky.....	2388
SAM, see School of Aerospace Medicine.		Sanders, L. D., field operations of National Severe Storms Project in spring 1962.....	11704
Sam Rayburn Memorial Veterans Center, designate, reports.....	10274, 15543	Sanderson, Agnes, French West Indies, agricultural production and trade.....	12315
Sama, L., oxidation resistant coatings for tantalum alloys, etc.....	48	Sanderson, H. Reed, effects of grass competition on bitterbrush.....	8664
Samoa, see American Samoa.		Sanderson, Rudolph, relief.....	1916, 2172
Samore, Theodore: college library building needs.....	6829	Sandia Laboratory, automatic data processing system leased, significant savings by purchasing, AEC, GAO report.....	10616
library statistics of colleges and universities, 1962-63.....	4625	San Diego, Calif.: occupational wage survey.....	7402
Sampling: census of population and housing, 1960, 1/1,000 and 1/10,000.....	11916, 21037	port, foreign trade (remarks).....	21298
iron ores for R-N process tests.....	8018	Sandpoint region, Idaho, ground water.....	15968
layer sampling for water-bearing horizons, USSR study.....	1247	Sands, Edward S., paper presented, Oct. 1, 1964.....	20769
moments of sampled binomially distributed variable.....	13332	Sandstone: formation damage estimated from water sensitivity tests, Patrick Draw area, Wyo.....	18702
procedures and tables for inspection by attributes, military standard.....	12304	nonopaque heavy minerals, Jurassic and Cretaceous age, Black Hills, Wyo. and S. Dak.....	4777
statistical procedure in examination of vouchers, permit—	12136	Sandwich construction, see Cylinders—Panels (aircraft)—Panels (building).	
hearing.....	17380	Sandy Hook to Cape Henry, coast pilot, supplement.....	6106
law.....	15534, 17745	Sanford, P. Bruce, index of publications by Branch of Technology, Bureau of Commercial Fisheries, 1955-59.....	14277
see also Assaying—also names of substances or objects sampled.		Sanford, Thomas B., Hall effect devices as magnetometers in cryogenic applications.....	11402
Samson, J. A. R., planetary physics, photolization cross sections of rare gases.....	14781	Sanford Reservoir: public recreation facilities, construct, operate and maintain—	
Samuel Gompers (U.S.S.): keel-laying (address).....	14661	law.....	17395
Samuelli, Nora L., relief.....	19557-558	reports.....	332, 17779
San Antonio, Tex., occupational wage survey.....	16604	San Francisco, Calif.: employment opportunities for the elderly, increase, hearings.....	10409
San Antonio Creek Valley, Santa Barbara County, Calif., geology and ground water.....	12520	housing problems of the elderly, hearings.....	14123
San Bernardino, Calif.: area, geologic and hydrologic features.....	8774	low-rent housing sites, high costs, GAO report.....	4761
occupational wage survey.....	5437, 21673	occupational wage survey.....	11277
principal electric facilities, map.....	677	police-minority group relations, civil rights report.....	1839
Sanchez, Gabriel A., relief.....	2141, 6250, 8202	port, harbor conditions, etc.....	622
Sancier, K. M., atom density measurements by luminescence of solids.....	9530	principal electric facilities, map.....	677
Sand: air-dry, strength-density relations, vehicle mobility research.....	19664	Sangster, Raymond C., survey of Soviet literature on semiconductor and thermoelectric science and technology.....	150
Bovill deposit, Latah County, Idaho, geology, etc.....	5480	Sanlos, Desplina A., relief.....	302, 1898
control, Communist China research.....	2037	Sanitary engineering, your career, toward healthier world.....	7703
discharge and mean-velocity relationships in sand-bed streams.....	18136	Sanitary engineers, conference, 1963, report of proceedings and committee programs, 1963-64.....	11572
glass, Oregon coastal dune sands for use, beneficiation studies.....	16635	Sanitation: atmospheric air protection in USA, Soviet report.....	15062
management of sandy soils in central U.S.....	27	control stations, work of radiology groups, USSR.....	9089
minerals yearbook chapter.....	21719	drainage water and reservoir beds, USSR studies.....	933
movement by wind.....	6587	equipment, Federal item identification guides for supply cataloging.....	12292
operations and costs, Martin Marietta Corp.....	5474	supplements.....	3473
scour and fill in sand-bed streams.....	6808	facilities for Indians, PHS authority under Public Law 86-121.....	15064
strontium migration through quartz sand.....	5991	home laundering.....	7923, 16954
transport by wind on natural beaches, calculation procedure.....	12337	in radiation, USSR studies.....	1229
uniform, infiltration and drainage (series).....	6805		
Sand dunes, see Dunes.			
Sander, D. H., height-age curves for Austrian pine in windbreaks on loess soils of Nebraska.....	783		
Sanders, Debra L., relief.....	14032, 17486		

# JANUARY-DECEMBER

	Entry		Entry
Sanitation—Continued		Sarcocystis, effect on life cycle of	
materials, CEC fact sheet-----	11742	Ehrlich's ascite carcinoma-----	9322
milk—		Sarcoplasm proteins and serum proteins during prolonged muscular activity and at rest, USSR-----	12701
and milk product equipment, guide for evaluating sanitary construction-----	20764	Sardines:	
honor roll, 1961-63-----	1561	Maine, firms canning, list-----	738
honor roll, 1962-63-----	11564	Pacific, firms canning, list-----	739
radiation microbiology in sanitary protection of reservoirs, USSR study-----	21631	Sargent, John F., lighter, amphibious, resupply cargo-----	11666
railroad, passenger and dining cars, standards applicable to construction, etc., handbook-----	9715	Sargent County, N.Dak., soil survey report-----	7743
standards for manufactured ice, PHS recommendations relating to manufacture, processing, etc., 1964-----	13418	Sarin, fatal intoxications, Bulgaria-----	9165
USSR studies-----	19834	Sarino, Joseph M., use of single total- and static-pressure probes to measure average mass velocity in thin rectangular channels-----	21760
San Jacinto fault, underflow across-----	8774	Sarpy County, Nebr.:	
San Joaquin Valley:		claim-----	
ground-water reservoirs, use for storage of surface water-----	6814	law-----	17284
ground water, story-----	18115	reports-----	14099, 15508
San Juan-Chama project:		Sartz, Richard S.:	
Cochiti Reservoir, make water available for pool for recreation-----		duration of percolation from loess soil-----	12458
law-----	8232	water yield and soil loss from soil-block lysimeters-----	6751
report-----	6331	Saskatchewan, snow survey and soil moisture measurements-----	18950
San Juan County, Utah:		Sasson, Aziza (Susan) relief-----	12197
geology of Abajo Mountains area-----	18132	Satellites:	
Mi Vida uranium mine, statistical interpretation of sample assay data-----	21717	Alouette-----	
San Juan Magnetic Observatory, magnetograms and hourly values-----	11058	Canada's 1st satellite-----	20534
San Lucas quadrangle, Calif., geology-----	4776	topside sounder, minimum telemetry receiving system-----	21783
San Luis unit, see Central Valley project-----		ANNA flashing, long line admuths from optical observation-----	19150
San Pablo Bay, port-----	623	Ariel I-----	
San Salvador, new theory identifying locale of Columbus' light, landfall, and landing-----	20794	environmental test program-----	7514
Santa Barbara County, Calif., geology and ground water of San Antonio Creek Valley-----	12520	1st international satellite, project summary-----	1451, 13156
Santa Clara County, Calif.:		astronomical observatory, ground operation equipment-----	3007
geology and quicksilver deposits of New Almaden District-----	8765	attitude sensors for ion engine control system, survey-----	11356
urban growth effect on streamflow regimen of Permanente Creek-----	18139	brushless d.c. motor application-----	7517
Santamour, Frank S., Jr.:		communications-----	
13-year growth of some green ash provenances in Northeast-----	8650	act of 1962, activities-----	
variation in sugar content in budded sugar maple clone-----	8653	hearings-----	14002, 17650
Santee Sioux Tribe, see Sioux Indians, Santo, John, Communist in workers' paradise, consultation, print additional copies, report-----	17568	report-----	6210
Sao Paulo, Brazil, Perus area, reconnaissance for uranium-----	17058	bibliography-----	14799
Sapountzis, Panagotis, Greek, basic course-----	1597	experimental, intercontinental testing, agreement with Canada-----	9808
Sapphire:		FCC rules and regulations-----	3993, 10516
dislocation structures in single-crystal Al <sub>2</sub> O <sub>3</sub> -----	19173	general information-----	11348
folia, energy spectra and angular distributions of electrons transmitted through-----	9539	intercontinental testing agreement with Denmark, Norway and Sweden-----	1604
Saprolegnia, fungi of fish and fish eggs-----	6716	law, part of 3d National Conference on Peaceful Uses of Space, proceedings-----	13157
Saprolite, heavy minerals in crystal line rocks, Shelby quadrangle, North Carolina-----	2418	military-civil roles and relationships-----	19510
Sapsuckers, see Woodpeckers-----		cryogenic propellant feed systems for electrothermal engines-----	13153
Sapuschnin, Willy, relief-----	290, 6148, 6391	earth, effects of magnetically induced eddy-current torques on spin motions-----	11389
Saratoga County, N.Y., West Milton area, geology and hydrology-----	12524	earth orbital, lifetime repeat-----	3013
Saratoga National Historical Park, general information-----	11470	Echo-----	
		buckling-----	16687
		inflation system-----	13224
		laminate, effect of electron irradiation on properties-----	21765
		laminate, mechanical properties-----	16690
		electromagnetic attitude control system study-----	11340-350
		Elektron, studies of earth's radiation belt, USSR-----	10998
		endless-loop tape transport development-----	13238
		Europe and space, French study-----	1133



# INDEX 1964

Satellites—Continued	Entry
Explorer—	
air density satellite, NASA facts.....	16661
directional dependence of counting rates.....	18792
ground tests and orbital launch results, comparison.....	16787
interplanetary, NASA facts.....	16660
measurements in upper ionosphere.....	13222
micrometeoroid satellite, NASA facts.....	20535
micrometeoroid stainless-steel penetration rate experiment.....	1458, 18772
real time PCM telemetry data processing and display test stand.....	13239
response of Redhead and Bayard-Alpert vacuum gauges.....	7533
vectorial reflectance of material.....	16701
Explorer VI and Pioneer V data.....	1448
Goddard projects summary.....	13137, 18716
Government publications, list.....	18884
high altitude water vapor determination.....	14783
instrumentation, use of solid circuits.....	14836
ionospheric research, agreement with Canada.....	15112
laser-satellite reflection parameters, launch 1963-21, decay prediction, using naval space surveillance system observations.....	16096, 20712
magnetic field encountered in circular orbits.....	7501
medium-data-rate digital telemetry system.....	14859
meteorological, present state and future prospects.....	13260
motion, simultaneous computation of secular and resonance effects.....	13223
near stable libration points, considerations for establishment.....	7557
Nimbus—	
cloud pictures, errors in geographic referencing.....	5520
cloud pictures, geographical grid, vibration reduction methods.....	9576, 18751
on 2d-order solution theory without air drag.....	20576
ORBIS beacon for investigating ionospheric ducting.....	5875
Orbiting Solar Observatory project, weaknesses in management, GAO report.....	6762
orbits—	
computation by Hansen method as modified by Musen.....	5524
drift of 24-hour equatorial orbit in earth gravity field through 4th order.....	7515
long range effects caused by moon and sun.....	9618, 14902
low-thrust orbit raising in continuous sunlight.....	9567
physiological reactions of animals during flights, USSR study.....	21481
predicted positions, providing accurate local antenna pointing, interpolation and coordinate transformation program.....	13218
Project Syncom, global communication network.....	1449
radiation measurements in non-adiabatic model of atmospheric movements, results, USSR study.....	6905
radioactivity in Sputnik 4 fragment.....	16997
recoverable, thermoluminescent dosimeters on.....	7052

Satellites—Continued	Entry
rendezvous, energy-optimal trajectories in 3 dimensions for terminal phase.....	13251
solid state separation sequence timer.....	16685
Soviet, nuclear components of cosmic rays, investigations made.....	12986
spin-stabilized, thermal radiation in elliptical earth orbit.....	9579
SSB-PM communication system, non-linear noise analysis in FDM telephony transmission.....	14892
Syncom I, range and range rate system and data analysis.....	13217
tape recorders, vibration isolation.....	7492
TIROS—	
attitude determination.....	13219
1st weather satellite, general information.....	5536
low resolution radiometer.....	20569
meteorological data, television cloud photography, catalogue.....	9682, 19026
NASA facts.....	7473
observation of orographically induced clouds, identification and significance.....	20966
radiation data recorded over New Zealand at night.....	7494
satellite system, report.....	5523
world atlas of photography.....	20525
torque-producing forces acting on, observations.....	16723
tracking characteristics of X-Y mount for data acquisition antennas.....	13213
tracking stations program, agreement with Nigeria.....	21891
using, for measurement of ionospheric electron concentration, USSR study.....	19874
Vanguard III, whistlers observed, data report.....	14857
Vinti's theory, determination of mean elements.....	13237
Vostok and Vostok-2, first manned group flight into outer space, Aug. 11-12, 1962, USSR study.....	14613
weather, vortex structure of cloud cover according to data.....	16730
yaw sensor, use of 2-degrees-of-freedom gyroscope.....	7531
see also Three-body problem.	
Saturn (rocket), see Rockets.	
Saucier, Kenneth L., high-compressive-strength concrete, development of concrete mixtures.....	11804
Saudi Arabia:	
economy, basic data.....	10708
labor conditions.....	13079
Sault Ste. Marie, Mich., lock on St. Marys River, designate John A. Blatnik Lock, report.....	8346
Santter, F. K., electrodeposition of dispersion-hardened nickel-Al <sub>2</sub> O <sub>3</sub> alloys.....	7665
Savannah, Ga.:	
occupational wage survey.....	16002
port.....	15873
salt-water encroachment—	
geology, etc., of area.....	4808
relation to major aquifer zones of area.....	19792
Savannah (nuclear ship):	
fact sheet.....	9489
public liability for damage caused, agreement with Ireland.....	20845
story.....	13098

# JANUARY-DECEMBER

Entry	Entry
Savannah (nuclear ship)—Continued	Savings bonds:
use of—	bond tips from your U.S. savings
Belgian ports and waters, agree-	bond reporter..... 3283
ment..... 5099	endorsement and payment regula-
Danish ports and waters, agree-	tions..... 11068
ment..... 18975	exchange of series H bonds for
Norwegian ports and territorial	series E, F, and J..... 11670
waters, agreement..... 13481	investments of individuals..... 8618, 8546
Spanish ports and waters, agree-	issued and redeemed..... 4124
ment..... 20826	now, build your own retirement
Swedish ports and waters, agree-	program..... 20778
ment..... 18976	progress of payroll savings (re-
United Kingdom ports and terri-	marks)..... 3177
torial waters, agreement..... 20832	series A-E, tables of redemption
ventilation system filter testing..... 19252	values..... 1546, 13385
Savannah National Wildlife Refuge,	series E, investment advantages..... 18935
birds, list..... 8606	series F & J, tables of redemption
Savannah River, AEC plant site, pop-	values..... 1547, 13386
ulation status of larger verte-	voluntary pay roll savings plan pro-
brates..... 8086	vision..... 9860
Savannah River project, AEC, insect	Savino, Joseph M., laminar heat
species in herb stratum of ser-	transfer in thin rectangular
icea lespedeza stand..... 1781	channels, etc..... 16716
Save Your Vision Week:	Sawdust, uses for sawdust and shav-
designate—	ings..... 14315
law..... 1971	Sawflies, see Flies.
reports..... 505, 2060	Sawlogs, see Logs.
Savery-Pot Hook project:	Sawmills, circular, aspects of sawing
construction, etc.—	accuracy..... 14810
hearings..... 6360, 12137	Saws, conveyorized cut-off, lumber
law..... 17426	kicker for..... 8037
reports..... 15493, 17797	Sawtimber, see Timber.
Saving and thrift, bona fide plan, re-	Sawtooth and half-sine shock im-
quirements under Fair labor	pulses from Navy shock ma-
standards act..... 11683	chine for medium weight equip-
Savings accounts, see Banks and bank-	ment..... 5598
ing.	Sawyer, William A., remarks, June 23,
Savings and loan associations:	1964..... 14672
flow of savings and mortgage lend-	Saxman, Alaska:
ing activity, all operating sav-	convey lands to—
ings and loan associations..... 3250	law..... 17288
FSLIC insured, foreclosures, num-	reports..... 8299, 15734
ber and rate..... 3807	Sayre, W. W., lateral turbulent diffu-
future executives in savings and	sion at surface of alluvial
loan industry (address)..... 19684	channel..... 18124
insured, average annual dividend	SB series..... 149,
rates paid..... 8545, 19683	1793-1800, 9849-53, 11658-664,
management and system, decisions	13491.
for today and tomorrow (re-	SBA, see Small Business Administra-
marks)..... 14239	tion.
mortgage interest rates on conven-	SC-1473 (vessel):
tional loans, largest insured	permit to engage in fisheries—
savings and loan associations,	hearings..... 10330
summary..... 3755	law..... 17195
mutuality in thrift industry (ad-	reports..... 13927, 15640
dress)..... 6631	Scab, see Cattle scab.
participation loan transactions..... 3836	Scabies, cattle eradication activities
place in Latin America (address)..... 4680	report, 1963..... 10
regulatory legislation, proposed	Scaffolding:
changes (address)..... 10520	prefabricated, Federal Item Identifi-
reserve regulations of Federal Home	cation guides for supply cata-
Loan Bank Board, amendments	loging..... 12292
(address)..... 8548	supplements..... 3473
savings and home financing—	Scale (logging):
chart book..... 12389	national forest log scaling hand-
source book..... 17978	book..... 14302
savings and loan industry, accom-	Scales (weighing instruments):
plishments, etc. (address)..... 2318	weighing and measuring devices,
savings and mortgage activity, se-	specifications, etc..... 20637
lected balance sheet items,	weighing bales of cotton at com-
FSLIC insured associations..... 3548	press..... 11736
selected balance sheet data, all op-	Scallops:
erating savings and loan asso-	Gulf of Alaska, explorations..... 14272
ciations..... 3250	industry, New Bedford, Mass., tech-
share accounts insurance, increase	nical study..... 17028
maximum coverage for each	sea, Canada industry..... 2338
depositor, reports..... 4465, 10281	Scanners, original-document, for input
trends, 1962..... 650	to computers, factors influenc-
see also Federal savings and loan	ing design..... 18811
associations.	Scanning, MTMS, stereo input study..... 7626
Savings and loan examiners, examina-	Scarangelo, Anthony A., Italian edu-
tion announcement..... 10102	cation..... 8492
Savings banks, see Banks and bank-	Scattered radiation from cobalt-60
ing.	source in brick structure..... 15236

# INDEX 1964

	Entry		Entry
Scattergood, Leslie W., herring fishery of U.S. Passamaquoddy region.	21320	Schlimke, Harry, tests of wind machine as aid to burning slash.	14324
Scattering:		Schindler, J. K., modification of electromagnetic scattering cross sections in resonant region.	19189
differential, cross section with charge exchange, calculation.	18791	Schiner, George R., geology and ground water conditions of Redwood Falls area, Redwood County, Minn.	15958
electromagnetic cross sections modification in resonant region, symposium record.	19189	Schist, Precambrian, sequence along Coal Creek, relationship to Idaho Springs Formation, Front Range, Colo.	18135
radiation scattered by nonequilibrium plasma, calculation of spectral density valid for all wave numbers.	13697	Schizophrenia:	
Rayleigh—		research	16744
for analysis of high Z atoms in low Z media, use of radioisotopes as source of X-rays.	19254	treatment—	
in ultraviolet region, altitude variation	19149	with psychotropic drugs, USSR study	21444
resonance, at Lyman-alpha by atomic hydrogen cell.	13221	with psychotropic preparations, clinical patterns, USSR study.	7347
spin zero elastic scattering with nuclear optical model, Fortran program for analysis.	9570	Schlanger, Seymour O., petrology of limestones of Guam.	14340
X-ray by weakly absorbing polycrystalline materials, absorption corrections for intensity.	13131	Schlegal, Woodrow A., Spanish agriculture, its competitive position	15838
Scattering of radio waves, see Radio waves.		Schmaedecke, W. W.:	
Schade, Robert O., wing stalling in transition effect on model of VZ-2 aircraft.	16698	rocket booster control—	
Schaefer, Charles II., studies on life history of Virginia pine sawfly.	14333	plants containing derivatives of control variable.	13145
Schaefer, John W., noncryogenic propellants for electrothermal thrusters.	7552	time optimal control with amplitude and rate limited controls.	14771
Schaefer, Edward A., World Fishing Gear Congress.	17999	Schmeltzer, Edward, remarks, Nov. 14, 1963.	661
Schaeffer, Harry G., thermal midplane stresses in plates.	18767	Schmidt, Dwight L., reconnaissance petrographic cross-section of Idaho batholith in Adams and Valley Counties, Idaho.	8760
Schaff, Herbert R., relief.	1911, 2186	Schmidt, E. D., cushioning materials for harvesting and handling fruits and vegetables.	13567
Schaffert, Justin C., solid state satellite separation sequence timer.	16685	Schmidt, J. P.:	
Schaffhauser, R. J., viscoelastic properties of styrene-acenaphthylene copolymers in transition region.	7655	intubation of abnormal aorta of Alaskan ground squirrel.	7987
Schafft, Harry A., power dissipated in diode swept along its reverse characteristic.	11441	variations of humoral and cellular elements of blood of Alaskan ground squirrels during hibernation and induced hypothermia.	19142
Schallau, Con H.:		Schmidt, L. B., demagnetizing factors for oblate spheroids used in ferrimagnetic resonance measurements.	18809
forest owners and timber management in Michigan.	12477	Schmidt, R. S., frog labyrinthine efferent impulses.	4259
rationale for small woodland research in Lake States.	8634	Schmidt, Robert G., geology of Cleveland quadrangle, Bearpaw Mountains, Blaine County, Mont.	18104
Scharpf, Robert F., dwarf mistletoe on true firs in California.	21324	Schmit, Lucien A., Jr., synthesis of simple shock isolator.	13149
Scheelite:		Schmitt, Marshall I.:	
ores, calcareous, flotation.	9503	industrial arts courses, grades 7-12.	17916
western, electrolytic extraction of tungsten.	18695	why industrial arts?	4652
Scheffer, Victor B., molt in the northern fur seal.	4744	Schneider, Elso, what part will schools play? Surgeon General's report on smoking.	19641
Scheldegger, Adrian E., lithologic variations in slope development theory.	12509	Schneider, Robert, Cenomanian-Turonian aquifer of central Israel, its development and use as storage reservoir.	21358
Schelman, James, helicopter rotor-blade differential pressures, stresses, and motions as measured in flight.	9564	Schnellbacher, E. E., address, Oct. 28, 1964.	21372
Schenectady, N.Y.:		Schnitzer, Martin, unemployment programs in Sweden.	12012
occupational wage survey.	14695	Scholarships:	
water resources.	4800	American Indian youth, general information.	2440
Schermerhorn, Richard A., psychiatric index for interdisciplinary research, guide to literature, 1950-61.	19011	higher education students, provide—	
Schexnayder, Charles J., Jr., composition, etc., of products of cyanogen-oxygen combustion.	18753	hearings	14151
Schild, Sylvia, parents of children with phenylketonuria.	13780	report	17804
Schilling, Guy A. W., how U.S. cotton is sold for export.	14289	School, Walter, consumption of fertilizers, etc., 1962.	1678

# JANUARY-DECEMBER

	Entry
Scholz, Harold F.:	
seeding and planting tests of north-	
ern red oak in Wisconsin.....	12475
variable stocking is problem in ex-	
periments involving direct seed-	
ings of northern red oak.....	8645
Schomer, Harold A., storage of	
sweet cherries in controlled at-	
mospheres.....	9908
School attendance:	
casework prevents dropouts, Nor-	
folk, Va., MDTA program.....	13024
dropout campaign, 1963.....	6561
dropout programs in public wel-	
fare, 1963, report.....	1660
school dropouts, selected reports	
and statistics.....	10473
School boards, see Educational boards	
and departments.	
School books, see Textbooks.	
School buildings:	
disaster areas, financial assistance,	
provide, hearings.....	17884
elementary and secondary schools,	
fall, 1963, statistics.....	15844
federally affected areas, construc-	
tion assistance.....	
annual report, 1963.....	6560
broaden assistance, hearings.....	19502
extend law, etc.—	
hearings.....	396, 17884
law.....	21157
reports.....	15732, 19483
maintenance procedures.....	10470
national inventory, school facilities	
and personnel, spring 1962.....	6572
physical facilities for school guide-	
ance services.....	8489
school plant administration (ser-	
ies).....	8491
school plant management series.....	10470
schoolhousing in 1963, survey of	
facilities to begin.....	602
urban facilities, planning, prob-	
lems.....	8491
School children, see Children.	
School districts:	
finances, census of governments,	
1962.....	4344
Hanover, N.H.-Norwich, Vt., Inter-	
state School District, granting	
consent of Congress to estab-	
lish, law.....	257
School facilities, see School buildings.	
School houses, see School buildings.	
School libraries, see Libraries.	
School life (periodical).....	4008
School lunches:	
national program, challenge of	
abundance (address).....	1698
national school lunch program.....	7937
type A, food buying guide.....	9959
whiting products tested.....	6706
School of Aerospace Medicine:	
aeromedical reviews.....	4258,
7997-98, 11805, 13646	
lectures in aerospace medicine,	
1964.....	16999
technical documentary reports.....	7079,
1742-49, 4259-60, 5895-5911,	
7999-8006, 9986-88, 11806-808,	
13647-651, 15236-242, 17009-15,	
19177-186, 20973.	
School plants, see School buildings.	
Schools:	
and unmarried mothers.....	19314
church-related, directory, 1963-64.	
citizens committees for better	
schools.....	17912
civil defense education.....	10095
Communist China, formation of	
half-work, half-study educa-	
tional institutions, experi-	
ments.....	10464

	Entry
Schools—Continued	
disaster areas, financial assist-	
ance, provide, hearings.....	17884
enrollment—	
increases 17 percent 1958-63.....	8122
personal and family characteris-	
tics of persons enrolled in	
school or college, etc.....	8140
population characteristics, cen-	
sus.....	13762
federal assistance, deny to institu-	
tions which practice racial dis-	
crimination, hearing.....	2110
federally affected areas—	
broaden assistance, hearings.....	19502
extend law, etc.—	
hearings.....	396, 17884
law.....	21157
reports.....	15732, 19483
operation assistance, annual re-	
port, 1963.....	6560
local and State systems, pupil ac-	
counting, handbook.....	21270
music in our schools, search for im-	
provement.....	15852
nongraded.....	19635
nonproperty taxation, possibilities	
for local application.....	589
public—	
Bible reading, Supreme Court	
decision, explanation.....	571
civil rights—	
Camden and environs.....	6073
cities in North and West, Buf-	
falo.....	10097
southern schools, 1963.....	10098
Southern States, 1963.....	15347
District of Columbia, educational	
employees on leave, increase	
partial pay—	
law.....	17331
report.....	17714
finance program, 1962-63—	
American Samoa.....	4634
Canal Zone.....	4635
Colorado.....	593
District of Columbia.....	4636
Georgia.....	2280
Guam.....	2281
Louisiana.....	4638
Maine.....	4639
Maryland.....	2282
Michigan.....	2283
Minnesota.....	17922
Nebraska.....	2284
New Hampshire.....	4640
New Jersey.....	4641
North Carolina.....	4642
North Dakota.....	594
Oklahoma.....	4633
Puerto Rico.....	593
Rhode Island.....	596
Texas.....	4643
Virgin Islands.....	8493
Wisconsin.....	
instruction in science, etc., Fed-	
eral financial assistance, guide-	
lines.....	8488
library statistics, 1962-63.....	21269
prayers and Bible reading, pro-	
posed constitutional amend-	
ments—	
hearings.....	17658
hearings, print additional	
copies, reports.....	17561, 17818
staff study.....	10329
Supreme Court opinions, print	
additional copies, re-	
ports.....	4456, 4534
segregation and desegregation	
problems conference, synopsis.....	6074
systems, directory 1963-64.....	15841
training schools serving delin-	
quent children, directory.....	199



# INDEX 1964

Entry	Entry
Schools—Continued	Schutt, John B.:
school-home cooperation in low-income neighborhoods in preparing city child for his school	phenomenological model of thermophototropism
15854	5525
school-home partnership in depressed urban neighborhoods	thermophototropism in corticated alkaline earth titanates
10471	13234
science equipment and materials, kits, criteria for selection, etc.	Schwaneke, Alfred E., quartz composite oscillator
603	11325
social work, service of schools	Schwartz, Frank G., storage stability of gasoline, etc.
10472	18104
State laws and regulations, for health, safety, driver, outdoor, and physical education	Schwartz, M. H., organization and administration of electronic data processing, functional approach
17924	681
State systems—	Schwartztrauber, Evelyn M., establishing business in Ghana
preliminary statistics, 1961-62	8820
statistics, 1959-60	Schweitzer Basin Ski Resort, dedication (remarks)
18188	5932
statistics, 1961-62	Schweppe, J. L., dynamic calibration of pressure transducers
19640	3046
stronger, through guidance, counseling, testing, etc.	Science:
607	academies of sciences, USSR—
Surgeon General's report on smoking, what part will schools play?	activities, 1962
19641	8934
teaching about United Nations in United States, 1960-1963, report	information on
14199	2757
welcoming visiting educators from abroad, suggestions	Academy of Sciences, Bulgaria—
10476	annual meeting
you and civil defense, guide for teachers, administrators, and school board members	5158
10096	Geological Institute
see also Elementary education—High schools—School buildings—School districts.	Institute of Organic Chemistry, tasks
Schramm, Wilbur, research on programmed instruction, annotated bibliography	7187
14194	Academy of Sciences, Hungary—
Schreiber, Zara M., relief	activities
1893, 2152	20266
Schreiner, Max P., development of power silicon gate controlled switch	awards outstanding scientists
18720	7032
Schroeder, H. J.:	Biological Sciences Department, leadership report
cadmium, minerals yearbook chapter	7257
14732	Mathematics and Physics Dept., annual report
gne., minerals yearbook chapter	8915
21722	miscellaneous information
Schuerch, H. U.:	10744
deployable centrifugally stabilized structures for atmospheric entry from space	presidium, annual report
14782	21405
rotary, deployable space power supply	qualification and degrees, directive of president
21734	16054
Schuldiner, S., kinetics of triiodide/iodine reaction on platinum electrode in neutral solution	Academy of Sciences, Kazakh SSR, activities, selected articles
7653	5198
Schult, Eugene D., roll controls applicable to fin-stabilized vehicles	Academy of Sciences, Moldavian SSR, structure and work
18793	11017
Schult, Veryl, inservice mathematics education, promising practices for elementary and secondary school teachers	Academy of Sciences, Poland—
19630	new members, 1962
Schulte, R. L., commercial peanuts, stocks, etc., seasons 1939-40 through 1962-63	organization of scientific information activity
16972	16441
Schultz, Clifford W., activities of copper and nickel in liquid copper-nickel alloys	Academy of Sciences, Rumania, achievements in 1963 and plan for 1964
9526	9321
Schultz, John D., field correlation of 2 neutron-scattering soil moisture meters	Academy of Sciences, Slovakia, achievements in past 10 years
18064	10922
Schultz, Leonard G., quantitative interpretation of mineralogical composition from X-ray and chemical data for Pierre shale	Academy of Sciences, Tadzhik SSR, discussion of future plans
18127	2717
Schultz, Leonard P., three new species of frogfishes from Indian and Pacific Oceans	Academy of Sciences, Ukrainian SSR—
18823	candidates for membership
Schultz, Vincent, offsite ecological research of Division of Biology and Medicine, terrestrial and fresh-water	Microbiology Institute, problems of research development
130	10764
Schumacher, Paul W. J., radar photographs and gust loads in 3 storms of 1961 Rough Rider	reports, translations
11705	20305, 21554
	Academy of Sciences, USSR—
	activities, 1962
	10972
	biological investigations
	16287
	candidates for active and corresponding members, list
	18201
	coordination conference on growth stimulants, etc.
	21507
	Entomological Society activity, 1963
	19960
	general meetings
	16095, 16483
	new additions
	18521
	new departments in operation
	11128
	physiology and biochemistry problems of microorganisms, studies and plans
	16204
	results and prospects
	9193
	sessions held by sections
	11109
	Technical Sciences Department—
	cybernetics, news
	4962, 8947
	news
	2582
	vacancies, announcement
	11098
	vestnik
	16395
	aerospace, bibliography
	16684

Entry	Entry
	Science—Continued
	agricultural, in full development, Rumanian study..... 18236
5525	agricultural science review..... 547, 3224
3234	American manpower, 1962, report of National Register of Scientific and Technical Personnel..... 20667
1325	bibliography, PL-480 translation program..... 11664
8104	bio-sciences, Soviet and Chinese articles, English abstracts..... 3444
	Bulgarian Scientific Association of Neurology, Psychiatry, and Neurosurgery, activities report..... 12980
681	Chinese mainland, bibliography..... 1793
8820	cold regions science and engineering, physical science..... 19653, 21278
5932	college and university, physical facilities planning aids..... 14196
8046	college students, junior-year enrollments, survey, 1962..... 10467
0972	Communist China—
8934	abstracts..... 5030, 5087, 5091, 5101, 5106, 5126, 5146, 5151, 5165, 5175, 5256, 5276, 5294, 5310, 5324, 5837, 5345, 6953, 7045, 7065, 7092, 7095, 7119, 7140, 7164, 7192, 7208, 7239, 7255, 7289, 8894, 8933, 8992, 9014, 9027, 9046, 9074, 9096, 9129, 9169, 9223, 9249, 9314, 9338, 9362, 10730, 10753, 10760, 10844, 10888, 10903, 10960, 10970, 10992, 11150, 11158, 11172, 11175, 11194, 11213, 14447, 14566, 14653, 16232, 16251, 16280, 16447, 16542, 19882, 19915, 19921, 19937, 19976-977, 20336, 20342, 21482.
757	
9292	
5158	
7187	
0266	
7032	
7257	
8915	
0744	
1405	
9054	
5198	
1017	
5047	
8441	
9321	
0922	
7717	
3108	
0764	
554	
0972	
2287	
3201	
507	
0960	
1483	
3521	
128	
3204	
1193	
1109	
8847	
2582	
1098	
3395	

Science—Continued		Entry
earth sciences—continued		
East European journals, abstracts.....	1128, 1344, 2691, 2780	
new developments, USSR study.....	7168	
USSR abstracts.....	20405	
East European abstracts.....	4963-67, 4975-76, 5019, 5035, 5070, 5104-5, 5110, 5149, 5162, 5184, 5196, 5201, 5207, 5224, 5226, 5231-32, 5249, 5254, 5274-75, 5293, 5298, 5317, 5326, 5338, 5345, 5353, 5371-72, 5397-98, 5407, 6880, 6882, 6886, 6899, 6902, 6925, 6947-49, 6976, 6978, 6985, 7012, 7014, 7026, 7042, 7111-13, 7120, 7131, 7195-98, 7203, 7207, 7254, 7262, 7337-39, 8860, 8890, 8892-93, 8895, 8921, 8950, 8971, 8982-83, 8990, 9015, 9026, 9052, 9073, 9077-79, 9100-1, 9131-33, 9156, 9161-62, 9168, 9170-71, 9206, 9224-25, 9237, 9287, 9306-9, 9327, 9351, 9367-70, 10729, 10754, 10814-815, 10864, 10871-872, 10874, 10959, 11000-1, 11041, 11050, 11062-65, 11089-90, 11184-185, 11196, 12587-589, 12598, 12613, 12636, 12643-645, 12654, 12679-680, 12719, 12721, 12789-740, 12782, 12837, 12845, 12856-857, 12867, 12874, 12888-889, 12892, 12908, 12910, 12942, 12955, 12957, 12998, 13008-10, 13020, 14421-423, 14426, 14431, 14434-435, 14469-470, 14524, 14564, 14596, 14600, 16003-4, 16010, 16014, 16043, 16045, 16081-82, 16085, 16100, 16108, 16120, 16122, 16149, 16218, 16235, 16268, 16274-275, 16286, 16318, 16361, 16368, 16376, 16444, 16446, 16461, 16486, 16526, 16540-541, 16543, 18213-215, 18223, 18250, 18278, 18291, 18312, 18337, 18369, 18374, 18380, 18387, 18402, 18423-424, 18428-429, 18433-434, 18455, 18466, 18476, 18490, 18492, 18526-527, 18554, 18557, 18588, 19858, 19922, 19927, 19981-983, 20008, 20064-65, 20125-127, 20142, 20156, 20335, 21392-393, 21395-396, 21416, 21424, 21431, 21434.	
East European journals, abstracts.....	904, 948, 967-968, 977, 984, 1034, 1044, 1063, 8084, 1087, 1099, 1125, 1128-29, 1173-75, 1192, 1216, 1218, 1261, 1291, 1308-9, 1344-47, 1353, 2482-83, 2496, 2523, 2631-33, 2666, 2687, 2690-91, 2700, 2726, 2741-42, 2762-42, 2780-81, 2789, 2803-5, 2840, 2849, 2853, 2855.	
publication notice.....		19831
economic and social implications, current projects, 1963.....		14987
education and government, surplus material, general information.....		10668
education, NSF programs, schedule.....		3068
electronic data processing, suggested techniques for determining courses of study.....		8481
elementary school, evaluation.....		15843
environmental sciences, organization in Federal Government (address).....		13531
equipment and materials, kits for school use.....		603
exchange program, agreement with USSR.....		15118

# INDEX 1964

Entry	Entry
Science—Continued	Sciences—Continued
failure of neopositivist concept of scientific knowledge, USSR study..... 1001	physical and mathematical, post-doctoral research associate-ships, opportunities at NBS..... 1495
Federal funds for research, development and other scientific activities, 1962-64..... 14988	Poland, technical role in development of national economy, translation..... 18443
financial assistance for strengthening instruction in public schools, guidelines..... 8488	role of scientist in today's world (remarks)..... 4311
future international meetings, world list..... 4167	Rumanian Academy scientific achievements, 1944-64, surveys..... 21547
government and science—	science and general welfare in democracy (lecture)..... 5993
hearings..... 4509, 17665	science and technology, SF— (series)..... 4009
statement of purpose..... 4508	scientific and technical exchange programs, planning and development, key contacts, inter-agency directory..... 15098
Government, science, and distracted scholar (remarks)..... 134	scientific and technical information in Federal government, status report..... 8541
graduate enrollment and Ph. D. output in scientific fields at 100 leading institutions, 1961-62 and 1962-63, trends..... 20651	scientific coordination conference on study of plant cover of Siberia and Far East..... 2558
health-resort, USSR studies..... 14462	scientific information notes, national and international developments..... 4012
help to sports, USSR study..... 18275	scientific information theory, research, USSR..... 2716
History and Technology Museum, papers, title page, etc..... 1511	scientific organization of labor and engineering psychology, USSR study..... 18238
Hungarian scientific personnel, regulations of salaries..... 12762	surveys of science resources series..... 18834
Hungary, medical science and social public health activities, relationship..... 21588	teaching aids—
information activities of Federal agencies..... 1515-17, 3069, 5573, 7621-23, 11475	checklist for asserting program... 2288
Air Force..... 5573	evidences of good program..... 604
Atomic Energy Commission..... 1515	teaching, STEPS program for improvement..... 4648
Library of Congress..... 11475	trainee, examination announcement..... 19338
National Institutes of Health..... 7622	USSR—
Naval Research Office..... 1517	abstracts..... 1006,
Naval Weapons Bureau..... 7623	1016, 1197, 2657, 2697, 2732-33,
Navy..... 1516-17, 7623	5042, 5107, 5169-70, 5283, 6972,
Public Health Service..... 7621	7162, 8973, 8996, 9035-36,
Ships Bureau..... 7623	9372, 10940, 11240, 12580,
international notes..... 3610, 7770	12690, 13015, 14424, 14577,
Israel, scientific and technical development..... 21495	16092, 16198, 16245, 16391,
Japanese, bibliography..... 1796	18193-193, 18376, 18498, 19900,
Journals, characteristics..... 21864	20056, 20092, 20115, 20166,
Kazakh SSR, achievements..... 8954	20343-344, 20353, 20365, 20384,
Lenin prizes, nominations, 1964..... 2743	21389, 21394, 21430, 21490,
NASA scientific and technical publications and how to obtain them..... 18726	21498, 21619, 21646,
NASA scientific reports for 1963, selected listing..... 11365	publication notice..... 19831
national defense education act, title 3, grants to strengthen instruction, questions and answers..... 15855	administration, articles..... 2816
National Referral Center for Science and Technology, general information..... 13094	articles..... 21504
natural—	Lenin prizes..... 16030
philosophical problems, USSR study..... 14563	Lenin prizes, attainments, 1964..... 11228
problems of methodology, USSR study..... 12936	medical sciences, progress..... 20051
USSR studies..... 2708, 2894	medical scientific meetings..... 19952
nauka i zhizn, translations..... 16184	natural science research, etc., in Aral region..... 5132
new, philosophical analysis, USSR study..... 16429	new achievements, conversation between Tass correspondent and member of Committee on Lenin Prizes in Science and Technology..... 16203
new scientific environment, challenge to engineering societies (remarks)..... 4309	Novosibirsk Scientific Center, organization, etc..... 4992
opens roads to future, USSR study..... 1244	organization and administration—
physical—	articles from Soviet press..... 2756
civil service cooperative work-study positions, opportunities for college students..... 17132	news..... 21614
foreign-language and English dictionaries, selected bibliography, 1952-63..... 16737	popular science library, bibliography..... 16172
physical sciences research papers..... 13636-645	public councils (Soviets)..... 16088
17003-8, 19165-176	scientific competitions, results..... 20230
	scientific council planned, new organ..... 12720
	scientific meetings, reports..... 9002
	Scientific-Methodological Athletic Council, plenum, results..... 20131

# JANUARY-DECEMBER

Entry	Entry	Entry
1495	Science—Continued	Scientific research—Continued
8443	USSR—Continued	Rumania, evaluation of effective-
4311	scientific works in physical ocean-	ness 2914
11547	ography, 1960-62 5339	statistical characterization, new as-
5993	translation 5176	pects, Rumanian study 11009
4000	trends and achievements 16492	Ukrainian SSR, plans, 1964-65,
15098	trends and developments 970	summaries 11114
8541	Volga region, poorly planned sci-	USSR—
2558	entific institutes 16201	deficiencies in planning work,
4012	see also names of sciences	translation 11117
2716	Science Advisory Staff, House, estab-	Marxist methods 11182
18238	lish, hearing 4499	organization, articles 20332
18834	Science Advisory Staff, Senate, estab-	see also subjects.
2288	lish, hearing 4499	Scientific societies, conference on co-
604	Science and Astronautics Committee,	operation among scientific-techni-
4648	House:	cal organizations of Social-
19338	calendar 3657	ist countries, Budapest, May
1006	committee print 4508	11-16, 1964 16562
2-33	hearings 414	Scientific-Technical Union, Bulgaria,
6972	2124, 4509-10, 8397-8400,	translations 16557
35-36	10345-346, 12154, 17665.	Scientists:
2580	Investigations and studies, aeronau-	biological, employment outlook 7375
4577	tical, outer space, and other	career opportunities, atomic en-
6391	scientific research, expenses re-	ergy 137
9900	port 12071	earth, employment outlook 9388
20166	reports 2037, 8291, 12104	employment in industrial research
20384	Science and Technology Office, appro-	etc., final report on survey 13306
21490	priations, 1965, hearings 10290	employment in State government
19831	Science and Technology Office, House,	agencies, 1962 14705
2816	establish, hearing 4499	Federal, personnel system, Federal
21504	Science and Technology Office, Senate,	merit system of interest to 6101
16030	establish, hearing 4499	Hungarian—
11228	Science course improvement projects	activities 1178
20051	series 7620	classifying system 8848
19952	Science Information Data Processing	qualification and training of as-
5132	Center, establish, hearings 398	pirants 5102
16203	Science, Space and Urban Life Con-	visits to bloc countries, report 20163
4992	ference, see Space, Science and	Hungarian Academy of Sciences
2756	Urban Life Conference.	awards outstanding scientists 7032
21614	Scientific and technical aerospace re-	Israeli personalities 2884
16172	ports 4011	labor market conditions, semiannual
16088	contract number index, cumula-	study 4657, 19647
20230	tion 9541	Latvia, important problems 1249
12720	cumulative indexes 4010	manpower studies, utilization, sal-
9002	Scientific and technical information	aries 6123
20131	(USSR periodical): 2015	medical research, cardiovascular,
19952	translation 2015	opportunities in Israel 20647
5132	Scientific and Technical Personnel,	new stage in consolidation of sci-
16203	National Register of, see	entific efforts, USSR study 2701
4992	National Register of Scientific and	physical, employment outlook 9406
2756	Technical Personnel.	requirements and supply in 1960's.
21614	Scientific apparatus and instruments,	role in today's world (remarks) 4311
16172	Early American scientific in-	scientific and technical personnel in
16088	struments and their makers 16758	industry 9665, 16613
20230	Scientific Council on Problems of Cy-	supply and demand 1960-70 2971
12720	tology, USSR, proceedings of	training facilities, USSR studies 8981
9002	1st session 14538	Ukrainian SSR 2549
20131	Scientific illustrators, see Illustrators.	USSR
19952	Scientific - Methodological Athletic	and Czech, cooperation 7227
5132	Council, USSR, plenum, re-	biographies 1191,
16203	sults 20131	2707, 2862-63, 5156, 7159, 8909,
4992	Scientific research:	9163, 12625, 12637, 12678, 14418,
2756	agriculture in Rumania, study 21399	16380, 19909, 20317, 20333,
21614	Air Force research bibliography,	21539
16172	1957-58 16986	Lenin prize awards, 1963 8964
16088	employment of aliens—	obituaries 11205
20230	law 17407	training 21603
12720	reports 17551, 17806	what it means to be a scientist
9002	Reclamation Bureau 9749	(remarks) 10040
20131	Federal funds, distribution, hear-	Scintillation:
5132	ings 17665	anion exchange resin, final report 13702
16203	Federal, 1962-64 14988	optical, over snow, ice, and frozen
4992	funds for research and development,	ground 12344
2756	Federal, 1962-64 14988	radio star over Canada during
21614	funds for research and development	July 20, 1963 eclipse 10153
16172	in industry, 1961, final report	Scintillation counters, directional de-
16088	on survey 13306	pendence of counting rates
20230	Institutes, criticized in Soviet	from Explorer IV 18792
12720	press 16431	Scioto County, Ohio, development pro-
9002	personnel, current problems in	gram, suggestions 15254
20131	management, 1st symposium,	Scioto River:
5132	proceedings 8540	flood control project, modify—
16203	practical application, USSR study	hearing 21211
4992	research grants of N.I.H., 1963, in-	report 10473
2756	dex 11451-452	

Do not order from index; see indicated entry

Page 569



# INDEX 1964

	Entry		Entry
Seinlth, Joseph A., digital tape recorder analyzer.....	21748	SCS, see Soil Conservation Service.	
Sclerosis, see Amyotrophic lateral sclerosis.		Sculpin (U.S.S.), submarine atmosphere studies.....	18863
Seola, D. A., catalytic hydrocracking of polyphenyl systems for reactor coolant reclamation.....	8059	Sculpture and statuary: presentation of statute of Abraham Lincoln to Mexico—	
Seollodon, see Sharks.		law reports.....	17258
Scope ratio-depth relationships for beam trawl, shrimp trawl, and otter trawl.....	14268	statue of Eusebio Francisco Kino—accepting, reports.....	17554, 17802
Scotland: education.....	2271, 8484	place temporarily in rotunda of Capitol and hold ceremonies, reports.....	17553, 17801
west coast, sailing directions.....	20672	proceedings at unveiling, authorize printing, reports.....	17560, 17803
Scott, Earnest O., relief.....	17694	statue of John Burke, acceptance, proceedings.....	2131
Scott, Glenn R., stratigraphy of Niobrara formation at Pueblo, Colo.....	21106, 21175	statue of Robert H. Goddard, erect, hearings.....	4510
Scott, Harold G., household and stored-food insects of public health importance, etc.....	1560	Scup, fishery, fluctuations in yield and their causes.....	15929
Scott, R. F., heat exchange at ground surface.....	19653	SD series.....	2256, 6552, 12306
Scott, Samuel J., subsonic aerodynamic heat transfer to surface recessed within forward stagnation region slt.....	3020	SDA equipment guide.....	18801
Scotti, Marie, remarks, June 24, 1964.....	14681	Sea, see Ocean.	
Scottish Rite Masons, see United Supreme Council, 33d Degree, Ancient and Accepted Scottish Rite of Freemasonry, Southern Jurisdiction.		Sea food, spiced and pickled, general information.....	10566
Scotts Bluff National Monument, general information.....	14978	Sea level, fluctuations, bedrock valleys of New England coast, relationship.....	19787
Scour and fill in sand-bed streams.....	6808	Sea otters, Soviet studies of ecology—	7107
Scout, see Rockets.		Sea scallops, see Scallops.	
Scranton, Pa.: occupational wage surveys.....	2964, 20440	Sea slicks, see Ocean.	
principal electric facilities, map.....	673	Sea urchins, fossil echinoids from Marshall Islands.....	15945
Scrap: boron, recovery by pyrohydrolysis, consumption and stocks at brass and wire mills, mineral industry survey, monthly.....	3284	Sea water: conversion—	
iron and steel—final data, monthly.....	3620	bibliography.....	847
minerals yearbook chapter.....	20482	by freezing.....	10679
preliminary data, monthly.....	3621	by reverse osmosis.....	6835
metals, temporary suspension of duties, continue—		catalyst of international cooperation (remarks).....	21369
law reports.....	13874	demineralization by electrically-induced adsorption on porous carbon electrodes.....	8802
super alloy, electrochemical recovery of cobalt-nickel alloy.....	13121	desalination pilot plant design.....	6836
zinc-base die-cast, use for zinc recovery.....	11323	distillation by large nuclear-powered plants.....	9754, 18936
Scrapers, zonal, radioassay of thin-layer chromatograms, blue-prints.....	11864	membrane technology, bibliography.....	848
Screening tests: Army enlistment—feasibility of abbreviated forms, methods for improving enlisted input.....	15275	multiphase ejectors for distillation desalination systems, study.....	10680
simulated branching tests, preliminary evaluation.....	15274	nuclear power use for production of fresh water from sea water, hearing.....	21159
Screens, vinyl-coated glass fiber insect screening and louver cloth, standard of trade.....	11430	report, 1963.....	8797
Screw propellers, see Propellers.		research and development test station, Wrightsville Beach, N.C.....	18164
Screw threads cutting by master-screw method since 1480.....	20654	salt concentration at phase boundaries.....	10678
Screwdrivers, V-slotted screw head and matching driving tool.....	7481	thin film vapor compression system.....	10673
Screws, V-slotted head and matching driving tool.....	7481	vapor reheat and liquid-liquid heat exchange.....	845
Scrip, see Land scrip.		Ice, structural control of vertical variation of strength.....	14203
Scrivner, C. L., soil survey report, Monticau County, Mo.....	18952	in coastal aquifers.....	10653
		relation of salt water to fresh ground water (series).....	19792
		salt-water encroachment of Savannah area, Ga.-S.C.....	4808
		relation to major aquifer zones.....	19792
		sea water batteries plus tunnel diode converter as power source.....	5606
		systems for experimental aquariums, collection of papers.....	14282
		technical exploitation of electrochemical processes occurring, USSR study.....	18370

# JANUARY-DECEMBER

	Entry		Entry
Seaborg, Glenn T. : remarks, addresses, etc.—		Seats :	
Nov. 7, 1963	138	aircraft free fall drop tests of F-100D ejection seat by articulated dummy or live jumper—	5884
Dec. 4, 1963	132	troop, installation in H-21 helicopter, test crash injury evaluation	7818
Dec. 7, 1963	1783	Seattle, Wash. :	
Dec. 9, 1963	1784	occupational wage survey—	7399
Jan. 11, 1964	4311	principal electric facilities, map—	676
Jan. 14, 1964	4309	Seattle-Alaska trade (remarks)	21299
Jan. 22, 1964	4308	Seaver, Robert E., cryogenic solutions and solubilities in liquid fluorine	14850
Mar. 11, 1964	5993	Seaweeds, Japanese research, survey	10555
Apr. 3, 1964	8096	SEC, see Securities and Exchange Commission	
Apr. 11, 1964	8093	Seckler-Hudson, Catheryn, Federal textbook on citizenship, our Constitution and Government	19810
Apr. 28, 1964	10035	Second-class mail matter, see Periodicals	
May 5, 1964	10040	Second transisthmian canal, hearings	8440
May 25, 1964	11872	Secondary education :	
June 5, 1964	11871	Clearinghouse Exchange of publications of State departments of education	14179
June 29, 1964	19265	publications	4631
Sept. 8, 1964	19267	shared-time programs, Federal assistance for acquisition of equipment, provide, hearings—	19506
Sept. 11, 1964	17067	Secondary oil recovery possibilities, Cow Run sand, Burning Springs pool, Wirt County, W. Va	14745
Oct. 10, 1964	19258	Secondary schools, see High schools	
Oct. 12, 1964	19266	Secret Service :	
Oct. 19, 1964	19261	members, retirement credit for former police service—	
Oct. 27, 1964	21020	law	17335
Seacliff, Calif., railroad accident—	6871	reports	13974, 15783
Seafaring wage rates, Atlantic, Gulf and Pacific districts	14726	protection, Kennedy, Jacqueline B., and minor children, provide, law	1924
Seafood, see Sea food		Secretaries, employment outlook—	9418
Sealers :		see also for departmental secretaries, names of departments or names of secretaries	
Federal item identification guides for supply cataloging	12294	Secular and non-secular behavior for cold plasma equations	13233
supplements	3475	Securities :	
Sealfit magazine	4013	act of 1933—	
Sealing, metal fill tubes, tool facilities	14810	amend—	6388
Sealing, coal-mine passage way through borehole, progress report	13129	hearings	17326
Seals (animals) :		law	13978
molt in the northern fur seal—	4744	reports	12053, 4015
North Pacific fur seals—		releases, SEC	
interim convention on conservation, protocol amending, report	10362	District of Columbia sales, regulation—	
protocol between United States, Japan, and USSR, amending interim convention of Feb. 9, 1957	13469	hearing	6348, 12259
northern fur seal, history, distribution and movements, etc—	8600	law	17362
Northwest Atlantic fisheries convention, protocol—	10361	reports	4469, 17722
report	14029	Federal reserve transactions, 1954—	
pelagic fur seal investigations, Alaska waters, 1962	8622	68	15903
Pribilof Islands, Alaska, 1962, fur seal investigations	8618	foreign, interest equalization tax act—	
Seals (numismatics) :		digest of testimony, etc—	10348
great seal of United States, description	16870	hearings	14134
House of Representatives, provide new seal and press, report—	2083	law	17421
Seals and glands :		reports	2075, 6302, 18724, 17592
device transmits rotary motion through hermetically sealed wall	11369	issued by State and local governments, authority of national banks to underwrite, hearings—	6346
dynamic seals friction and wear studies in liquid fluorine and liquid oxygen	18779	markets, investor protection—	
self sealing disconnect for tubing	7482	hearings	8388
Sealy, W. C., vascular responses to hypothermia	9977	law	17326
Seamanship, see Navigation		reports	12053, 13978
Seamen, see Sailors		special study report	276
Seaplanes :		publications, price list—	1551
bases, directory, airman's guide supplement	3424	redeemable, list—	10544
P6M, procurement from Glenn L. Martin Co., additional costs, GAO report	8705	special market study releases—	4046
Seaports, see Ports		traded on exchanges	4017, 11599
Searles Lake, evaporite deposit, character and distribution of non-clastic minerals	19777	transactions and holdings—	3813
Season's first tobacco market reports	15191		
Seat belts, see Automobile seat belts			

# INDEX 1964

	Entry		Entry
Securities—Continued		Sedimentation and deposition—Con.	
United States corporate, promote increased foreign investment to reduce deficit in U.S. balance of payments-----	11538	Salt Creek basin, Nebr., sedimentation and chemical quality of water-----	822
see also Government securities—National securities exchanges.		sediment discharge during floods in eastern Nebraska-----	18121
Securities and Exchange Commission: appropriations, 1965—		sediment transport in alluvial channels (series) - 811, 6808, 10646, sediment transport parameters, Rio Puerco-----	811
amendment-----	10192	sediment transported by Georgia streams-----	4812
hearings-----	10290	sedimentation in small drainage basins (series)-----	21364
supplemental, proposal-----	17468	sedimentation of Lake Pillsbury, Lake County, Calif-----	6815
companies filing annual reports, 1963-----	9758	stream sediment transport, storm-period variables, affecting analysis-----	10646
functions and activities-----	9760	transport rate of bed material due to wave action-----	12339
members, nomination of—		See America Year, 1964, designate report-----	2053
Budge, Hamer H., hearing-----	14130	See the United States: 1964 and 1965, designate period to—	
Owens, Hugh F., hearing-----	8439	law-----	17275
Wheat, Francis M., hearing-----	17871	report-----	14084
news digest-----	3793	travel new world of great outdoors-----	20867
releases-----	3209, 4015-	Seebeck coefficients, see Coefficients.	
3375, 3575, 3616-17, 3686, 16, 4046, 4053, 4097.		Seed crops, see Crops.	
report, 1963—		Seedbeds, burned, longleaf seed losses to animals-----	18075
departmental edition-----	11598	Seeding, see Forest planting.	
document edition-----	10179	Seedlings, pine grades and seedbed density in California nurseries—	8667
securities markets, investor protection—		see also names of plants or trees.	
hearings-----	8388	Seeds:	
law-----	17326	Federal seed act, amend to prohibit importation of screenings, report-----	21190
reports-----	12053, 13978	field, acreage, yield, production, etc., U.S. crop years 1957-63-----	7803
special study, report-----	276	foreign agriculture circulars-----	3520
statistical bulletin-----	4052	foreign trade prospects-----	8629
Securities exchanges:		forest tree, protecting from wild mammals-----	8684
act of 1934—		germination of repellent-treated seed before and after storage—	8668
amend—		longleaf seed losses to animals on burned seedbeds-----	18075
hearings-----	8388	seed crops—	
law-----	17326	forecast-----	4018
reports-----	12053, 13978	prices-----	4019
as amended to Jan. 1964, text—	9759	stocks report-----	4020
companies filing annual reports, directories, 1963-----	9758	trees and shrubs, dealers' directory—	791
releases, SEC-----	4016	see also names of plants.	
code of Federal regulations-----	10531	Seepage, ground water, from road cuts, flow meter for measuring-----	10589
see also National securities exchanges.		Segal, Julius, research in schizophrenia-----	16744
Securities investigators, examination announcements-----	215, 17146	Segregation, see Race problems.	
Security, see National defense—National security.		Seibel, Robert, perception and short term memory under work load stress-----	20706
Security and Consular Affairs Bureau: change name to Consular and Migration Affairs Bureau—		Seidl, Wolfgang, relief— 10199, 14044, pictorial review-----	17170
law-----	1934	Seigel, Victor, America in space, pictorial review-----	16657
report-----	384	Seismic measurements:	
Security of vessels and waterfront facilities-----	17155	gravity and seismic studies in Crooks Gap area-----	14337
Sedimentary rocks, bedrock valleys of New England coast as related to fluctuations of sea level-----	19787	sounding data, effect of refractive boundary curvature when interpreting, USSR calculation-----	9033
Sedimentation and deposition:		Seismic model impactor-----	1737
apparatus and techniques for measuring bedload-----	19797	Seismicity, see Seismology.	
bottom sediments, equatorial Pacific, biostratigraphic separation, USSR study-----	7179	Seismographs:	
clayey sediments, removal of water and rearrangement of particles during compaction-----	14346	record vibrations produced by blasting, instrumentation design requirements-----	14763
flow resistance and sediment transport, Rio Grande near Berna-Hilo, N. Mex-----	10648	seismographic instruments-----	1292
fluvial sediment discharge in streams, determination of loads by measurement and analysis—	14363	seismographic prospecting equipment, USSR-----	16382
fluvial sediment in Kiowa Creek basin, Colo-----	21364	unmanned seismometer levels self-corrects drift errors-----	13196
measurement and analysis of sediment loads in streams-----	14363		
reservoir sediment surveys made in U.S. through 1960, summary-----	13593		
Saline River basin, Kans-----	4810		

# JANUARY-DECEMBER

	Entry
Seismography, possibility of using deep explosions for seismic investigations in deep-sea regions by reflected waves method, USSR study-----	16513
Seismologists, USSR, visit USA-----	2832
Seismology:	
earthquake epicenters, determining direction from Love and Rayleigh waves, USSR study-----	6891
engineering, problems, USSR study-----	9325
Kurile Island arc, USSR study-----	6878
morphology of Mohorovicic discontinuity and its structural significance-----	20331
seismic observation methods, USSR studies-----	6910
seismicity, final report 1960, worldwide collection and evaluation of earthquake data-----	17016
seismological bulletin-----	4022
Antarctica-----	3256
IGC supplement, South Pole Byrd-----	4021
Soviet seismologists visit USA-----	2832
see also Earthquakes.	
Seismometers, see Seismographs.	
Selective service, see Conscription.	
Selective Service System:	
appropriations, 1964, deficiency, hearings-----	10285
appropriations, 1965-----	
hearings-----	10290
supplemental, proposal-----	21165
regulations-----	4032
report, 1963-----	11600
Selenides, surface energies-----	3038
Selenium:	
oilfield waters, analyzing method-----	14756
report, quarterly-----	4033
Self-balancing beam permits safe, easy load handling under overhang-----	9561
Self-regulation in advertising-----	11978
Self teaching systems with positive feedback, USSR-----	16281
Selfridge Air Force Base:	
runway facilities deterioration-----	12120
hearings-----	21201
report-----	
use of unsuitable materials to construct airfield pavements, Air Force Dept., GAO report-----	10628
Seligberger, Ludwig, comfort factors in leather footwear-----	3117
Sell your products through U.S. trade missions overseas-----	869, 19825
Selling, see Mail order business-----	
Salesmen and salesmanship-----	
Selling to NASA-----	11425
Semiconductors:	
basic circuitry for ecological and behavioral studies of insects-----	15195
devices-----	
market in West Germany and Italy-----	13740
proton damage-----	11354
four-point probe resistivity measurements, correction factor-----	9635
materials for electron devices, bulk resistivity measurement, bibliography-----	21785
physics of semiconductors and metals, USSR study-----	20303
radiation damage to semiconductors by high-energy electron and proton radiation-----	14775
radiation effects-----	14891
resistivity measurements using 2-point and 4-point probe on rectangular bar-shaped sample-----	13276
semiconducting compounds with thermoelectric applications, report-----	16896
solid state infrared detection-----	5867

	Entry
Semiconductors-Continued	
Soviet literature, survey-----	150
technology and microelectronics, USSR study-----	5307
Semler, Thor T., neutron self-shielding factors for multiple-body concentric cylindrical configurations-----	20572
Semmler, R. A., neutron-moderation moisture meters, application to coal and soils-----	19231
Semyan, John, digital ohmmeter-----	21751
Senate:	
appointment of Pierre Salinger as Senator from California-----	
hearing-----	15822
report-----	17726
appropriations, 1964, legislative-----	
law-----	1976
report-----	337
appropriations, 1965, legislative-----	
amendments-----	10185
hearings-----	15794
law-----	17313
report-----	15699
calendar, executive-----	3676
calendar of business-----	3600
delegation to 3d Mexico-United States Interparliamentary Group meeting, report-----	4582
delegation to 4th Mexico-United States Interparliamentary Group meeting, report-----	14137
delegation to 7th meeting of Canada-United States Interparliamentary Group-----	12265
financial interests of Senators, officers of Senate, etc., disclosure, report-----	14075
inquiries and investigations, list-----	10440
journal, 88th Cong., 1st sess-----	6373
journal of executive proceedings, 88th Cong., 1st session-----	10349
index-----	14022
Members, nomination and elections, Federal and State laws, summary, print as Senate document, report-----	8431
officers and employees, prohibit certain activities, etc., report-----	14075
officers or employees, financial and business interests, investigation-----	
hearings-----	4594
index 6326, 8456, 10438, 12281, 14156-----	
reports to witnesses and exhibits-----	15823
report-----	14104
rules of procedure-----	10430
papers relating to presidential nominations, 1789-1901-----	21781
prayers offered by Chaplain, 87th-88th Congresses, print as Senate document, report-----	19575
Secretary, report 1963-----	4518
Secretary, report, omitting names of witnesses-----	
law-----	21148
report-----	19576
standing rules, amend, reports-----	14075
14082-----	
telephone directory-----	8405
youth program, continue, report-----	10396
Senate bills-----	418
2130, 4515, 6374, 8406, 10350, 12165, 14023, 15605, 17606, 19525-----	
Senate documents-----	419-422
2131-36, 4516-20, 6375-76, 8407, 10351-359, 12166-173, 14024-26, 15606-614, 17667-671, 19526-536, 21216-219-----	
Senate executive documents-----	2187
6377-79, 10360-361, 14027-28-----	



# INDEX 1964

	Entry		Entry
Senate executive reports.....	423, 4521, 10362-367, 14029-30, 15615	Sergeant, Russel L.—Continued	
Senate reports:		speech during respiration of mix-	5469
private.....	425-453, 2138-82, 4522-24, 6380-6440, 8408, 10368-393, 12174-204, 14031-47, 15616-671, 17672-703, 19337-558, 21220-225.	Sergeant at Arms, see House of Rep-	
public bills.....	454-514, 2183-2227, 4525-67, 6441-90, 8409-82, 10394-407, 12203-243, 14048-120, 15672-786, 17704- 859, 19559-585, 21226-235.	Sergosin, use in treatment of varicose	
Seneca Indians:		dilated veins, USSR study....	1282
relocation, etc.—		Serial set (congressional).....	282
hearings.....	6359, 8448	1859-61, 4417-19, 0133-36, 8196-98, 10186-138, 13839, 15330-382, 19369-370.	
law.....	17392	Serials:	
reports.....	6275, 8418, 17596	agriculture bibliography, serial pub-	
Senegal:		lications indexed in.....	14930
agricultural commodities, agree-		copyrighted, catalog of copyright	
ment.....	16879	entries.....	8458
Army area handbook.....	10016	new serial titles—	
economic and sociological data.....	16107	alphabetical arrangement.....	3790
foreign trade regulations.....	14383	classified subject arrangement.....	8789
Peace Corps program, agreement.....	3161	3d edition, 1963 cumulation.....	14719
trade agreements, laws and decrees.....	2534	union lists, bibliography.....	20453
Senior citizens, see Aged.		Series 60, methodical experiments	
Senior Citizens Month, guide.....	15169	with models of single-screw	
Sense organs:		merchant ships.....	13438
functional state of certain analyz-		Sernini, Livia, relief.....	425
ers as function of sex and age,		Serological tests, see Syphilis.	
USSR study.....	20413	Serology:	
neurological and sensory disease		general and technical information.....	5461
service program, PHS.....	15060	serological studies of fish, use of	
Sensitivity indices for Hall genera-		plant extracts.....	10574
tors.....	7582	Serum and serumtherapy:	
Sensors:		blood serum enzyme activity, in-	
attitude, study.....	11356	crease due to strong stimuli,	
biological mechanisms for applica-		USSR study.....	12795
tion to instrument design.....	16654	blood serum protein, change,	
device for counting micrometeoroid		patients with chronic radiculit-	
penetrations.....	13180	is during treatment with vi-	
flight informational, of X-15 air-		bration baths, USSR study.....	14575
plane for atmospheric and		serum proteins in relation to peri-	
near-space flight missions.....	16712	odontal status and caries ex-	
integrated hot wire-still well liquid		perience.....	1747
level system for liquid hydro-		toxic properties of sera after re-	
gen and other cryogenic fluids.....	1474	peated thermal trauma, USSR	
satellite yaw, use of 2-degrees-of-		study.....	14468
freedom gyroscope.....	7531	Servants:	
solar angle, has no moving parts,		social security—	
design.....	18172	coverage for household em-	
thermocouple, circuit for continu-		ployees.....	7735
ous monitoring.....	20546	good news for household	
Sensory diseases, see Sense organs.		workers.....	9770
Separation (military):		women private-household workers,	
disability separation, facts for your		fact sheet.....	13552, 19038
future.....	20981	Service, Alfred L., western phosphate	
Separation processes, cost estimates		industry and its resources.....	16636
of processes for separating mix-		Service and regulatory announce-	
tures of methane and hydro-		ments, Agricultural Marketing	
gen.....	20506	Service.....	9, 11739, 19046-47
Separators, see Magnetic separators.		Service area directory.....	1590
Septic tanks, percolation systems, fail-		Service contracts act of 1963.....	12112, 12127
ure, causes and prevention.....	14240	Service establishments, retail and	
Sequential analysis, questionnaire		service enterprises and estab-	
language and abstract synthe-		lishments under Fair labor	
sis of minimal sequential ma-		standards act.....	13514
chines.....	21780	Service industries:	
Sequential machines, see Sequential		East European, translations.....	951
analysis.		1047, 1065, 1212, 1262, 2479, 2568, 2681, 2727, 2908, 4920, 5008, 5064, 5148, 5190, 5230, 5290, 5319, 5332, 5375, 6917, 7037, 7241, 7348, 8897, 8918, 8972, 9070, 9098, 9139, 9208, 9212, 9366, 10767, 10789, 10794, 10813, 10878, 10984, 11076, 11085, 11103, 11126, 11154, 11224, 12593, 12616, 12634, 12669, 12713, 12741, 12763, 12788, 12810, 12835, 12840, 12902, 12911, 12960, 12965, 12985, 14416, 14433, 14539, 14551, 14583, 14590, 14647, 16012, 16052, 16150, 16163, 16238, 16250, 16412, 16436, 16484, 16533, 16227, 18264, 18283, 18298, 18377, 18457, 18528, 18561, 18575, 19860.	
Sequoia National Park:			
general information.....	14979		
map.....	18838		
Serafini, John S., wall-pressure fluc-			
tuations and pressure-velocity			
correlations in turbulent			
boundary layer.....	9614		
Sergeant, Russell L.:			
relation of perstimulatory adapta-			
tion to other short-term thresh-			
old-shifting mechanisms.....	5467		
sensitivity to unidirectional fre-			
quency modulation.....	5468		

# JANUARY-DECEMBER

Entry	Entry
Service industries—Continued	
East European, translations—Con.	
19926, 19967, 20036, 20063,	
20081, 20096, 20180, 20211,	
20358, 21387, 21428, 21455,	
21515, 21529, 21569, 21625,	
21641.	
preparation of policy plans for	
local industries, experiences...	2561
Service records, <i>see</i> Military records.	
Service-station attendants, gasoline,	
employment outlook...	9429
Service stations, employee earnings...	11275
<i>see also</i> Flight service stations.	
Service trades:	
equipment, Federal item identifica-	
tion guides for supply catalog-	
ing...	12291
supplements...	3472
fair labor standards act, provisions...	19013
recordkeeping systems, bibliogra-	
phy...	9765, 21867
travel service center in Henryetta,	
Okla., economic feasibility,	
ARA study...	11820
Service, USDA's report to consumers...	18160
Servicemen, <i>see</i> Armed Forces—	
Mechanics (persons).	
Services for senior citizens, hearings...	12249
Servicing techniques for transistori-	
zed and printed circuits...	15001
Serving people in need, public assist-	
ance under social security act...	10497
Servo Corporation, Servo analyzer	
(Servoscope) 1100 A, B, C, D	
models, instrument calibration	
procedure, technical manual...	11509
Servomechanisms, vapor pressure sys-	
tem for measuring metal hal-	
ides...	11327
Servomotors, rotating and static pre-	
cision components symposium,	
proceedings...	15009
Servoscopes, models 1100 A, B, C, D,	
instrument calibration proce-	
dure, technical manual...	11509
Sethares, James C., spin wave anis-	
otropy in parallel pumping ex-	
periments on YIG...	9970
Settees, wood, general office, Federal	
standard cancellation...	4722
Setterholm, Vance C., effect of re-	
straint during drying on ten-	
sile properties of handsheds...	18079
Sevastopol, Russian SFSR, defense	
battles during 1941-42, diary	
of A. I. Kovtun, USSR...	1270
17-hydroxycorticosteroids, <i>see</i> Hydro-	
cortisone.	
Sever, Bruce B.:	
basic data on economy of—	
Bahama Islands...	15983
Barbados...	15987
foreign trade regulations of Peru...	21074
Severance, Roger D.:	
foreign trade regulations of United	
Arab Republic...	4854
selling in United Arab Republic...	6852
Severiens, Jacobus T., market fac-	
tors in Netherlands...	14388
Sewage:	
activated sludge process, treatment	
of undiluted human waste...	19146
disposal of waste water at Federal	
installations, report...	15527
effects of miscellaneous wastes on	
mesophilic activated sludge,	
soaps, detergents and vomitus...	20973
farmstead sewage and refuse dis-	
posal...	22
Industrial, from enterprises engaged	
in organic synthesis, effective-	
ness of biological methods of	
purifying, USSR study...	7058

Entry	Entry
Sewage—Continued	
miscellaneous wastes, effects on	
mesophilic activated sludge	
cellulose...	15240
municipal, sewer construction cost	
index, trends...	11577
sanitation facilities for Indians,	
PHS authority under P.L.	
86-121...	15064
sewage and water works construc-	
tion, contracts awards...	18922
sewer bond sales, 1963...	16847
treatment contract awards by loca-	
tion, 1963...	15065
treatment equipment, Federal item	
identification guides for supply	
cataloging...	12292
supplements...	3473
treatment facilities, 1962 inven-	
tory...	3101-9
treatment plant, transfer to Mc-	
Kinney, Tex.—	
law...	17299
reports...	10279, 15755
treatment plants, modern, how much	
do they cost? guide to estimat-	
ing construction costs...	20765
urban sewerage systems, State and	
local authority to provide or-	
derly development...	11578
Sewall, John L., vibration study of	
ring-stiffened cylindrical shell	
structure...	18743
Seward Peninsula, geology of Imuruk	
Lake area...	2416
Sewerage, <i>see</i> Sewage.	
Sewers, <i>see</i> Sewage.	
Sewing, enterprises and trading or-	
ganizations, expand economic	
ties, USSR translations...	19945
Sex hormones, <i>see</i> Hormones.	
Sferics:	
studies of 500-kc./sec. in severe	
storms...	11703
transpolar, directive VLF antennas	
for reception...	19106
Shad, firms canning, list...	774
Shade and water for honey bee colony...	15210
Shaffer, H. W., range and range rate	
system and data analysis for	
Syncom I (1963 4A)...	13217
Shafting, propeller of naval vessels,	
glass reinforced plastic coat-	
ings, instruction manual...	9763
Shaikh, M. S., solid state radiation	
detector...	204
Shale, Correll C.:	
electrical precipitation at high tem-	
peratures, etc...	2993
positive corona for electrical pre-	
cipitation...	9514
Shale:	
lightweight aggregates—	
expanded, industry in south cen-	
tral United States...	20478
Iowa, expansion properties...	9510
Minnesota, expansion properties...	1434
Pierre—	
cephalopods...	18138
geochemical investigations, ana-	
lytical methods (series)...	18127
mineralogical composition, quan-	
titative interpretation from X-	
ray and chemical data...	18127
Ploche faunules...	19789
<i>see also</i> Oil shale.	
Shambon, Arthur, ionization cham-	
bers for environmental radia-	
tion measurements...	1770
Shands, W. A., potato insects...	11752
Shanklin, Edward H., effects of cotton	
ginning practices on cotton	
yarn properties, weaving per-	
formance, and fabric proper-	
ties...	9951

# INDEX 1964

Entry	Entry
Shanks, Robert E., dynamic stability of towed parawing glider air cargo delivery system-----	16682
Shannon, Ira L.: ascorbic acid levels in blood and urine as related to oral health-----	1746
cortisone oral glucose tolerance responses in healthy young adult males classified as to oral health status-----	19186
device for collection of parotid fluid from isolated human subjects-----	8003
enamel surface protection by tap-water solutions of stannous fluoride-----	8002
fasting and postprandial serum glucose levels-----	19181
hematologic changes following simple exodontia-----	5900
in vitro effectiveness of topical applications of low concentration stannous fluoride solutions-----	13647
inactivation of stannous fluoride by calcium pyrophosphate-----	5909
intramuscular ACTH test based on parotid fluid free 17-hydroxy-corticosteroid levels-----	17013
oral glucose tolerance responses in healthy young adult males, etc-----	4260
parotid fluid corticosteroid levels at 1 and 2 hours after graded doses of ACTH-----	19183
prophylaxis pastes prepared with X-14 stannous fluoride solution-----	5910
reductase activity of human whole saliva as related to dental caries experience-----	11808
serum proteins in relation to periodontal status and caries experience-----	1747
shelf life of aqueous solutions of stannous fluoride-----	5911
Shanoff, Leslie B., relief-----	12043
Shapes (metal): Federal item identification guides for supply cataloging-----	12292
supplements-----	3473
Shapiro, Gustave, project FIST, fault isolation by semi-automatic techniques-----	18805
Shapiro, Harvey, 1964 revenue act, provisions of significance to farmers-----	8470
Shapiro, Ivan R., whistlers observed by Vanguard III-----	14857
Shapiro, Shirley, relief-----	15477
Sharble, Elfriede U., relief-----	6390
Sharkey, Andrew G., advances in coal spectrometry-----	1437
Sharks: carcharhinid, revision of genera scollodon, loxodon, and rhizoprionodon-----	18821
northeastern U.S., Maine to Chesapeake Bay, anglers' guide-----	10557
predators of sea and their commercial catches, USSR study-----	10918
see also Whale sharks.	
Sharon, Joseph, and wife, relief-----	2024
6149, 6392	
Sharonville, Ohio, overlay test track-----	4670
Sharp, Robert R., nature of liquid film evaporation during nucleate boiling-----	21750
Sharp, William N.: geology and uranium deposits of--Pumpkin Buttes area of Powder River basin, Wyo-----	15941
southern part of Powder River basin, Wyo-----	10629
Sharpe General Depot, Lathrop, construction, report-----	353
Shasta, Calif., proposed Whiskeytown-Shasta-Trinity national recreation area, report-----	1535
Shasta County, Calif., geology of French Gulch quadrangle-----	8754
Shasta Dam, general information-----	3119
Shasta red fir, see Fir.	
Shaw, Henry L., jr., history of Marine Corps operations in World War II, isolation of Rabaul-----	9488
Shawnee Indians: Absentee-Shawnee Tribe, convey land to-- law-----	17280
reports-----	12107
funds, disposition-- law-----	17316
reports-----	8321
tribal land in Oklahoma, authorize sale-- law-----	17272
reports-----	10233
Shea, Jack J., relief-----	6239
Shear, C. R., & Sons, relief-----	12182
Shear (mechanics): block shear methods for determining shearing strength of solid wood, comparison-----	12449
deformation of upper mantle mineral analogues-----	19151
evaluating shear strength of plastic laminates reinforced with unwoven glass fibers-----	18052
new shear apparatus for temperatures of 1000° C and pressures of 50 kb-----	1739
soils subjected to vibratory loads, stress measurements in situ-----	8513
zones in ice cap margin, Thule, Greenland-----	12343
Shedd, Edward S., continuous electro-winning of cerium metal from cerium oxides-----	7441
Sheep: bluetongue, incidence, reported in U.S., 1963-----	19056
itch mite reported in New Mexico on feed-- Nov. 1, 1963-----	16937
Jan. 1, 1964-----	7808
Mar. 1, 1964-----	9544
scabes eradication activities report, 1963-----	13488
stocker and feeder, shipments-----	10
Sheep ranges, see Range lands.	4034
Sheet metal: behavior under biaxial stress, USSR study-----	5369
Federal item identification guides for supply cataloging-----	12292
supplements-----	3473
forming technology, final report-----	5868
repairs and utilities, Army technical manual-----	7958
Soviet rolling technology-----	10012
titanium alloy stamping, USSR study-----	8870
Sheet metal workers, employment outlook-----	5060
Sheet-plastics, plastic sheet from United Kingdom, determination of no injury to U.S. industry-----	7385
Sheets, current industrial reports-----	20850
Shelburne Harbor Ship and Marine Construction Co., Inc., relief-----	11901
Shelby quadrangle, N.C., heavy minerals in saprolite of crystalline rocks-----	1894
	2157
	2418

# JANUARY-DECEMBER

	Entry
Sheldon, John W.:	
mobility of positive ions in their own gas.....	16713
semiclassical calculation of differential scattering cross section with charge exchange, cesium ions in cesium vapor.....	18791
Sheldon, Richard P.:	
physical stratigraphy and mineral resources of Permian rocks in western Wyoming.....	2420
relation between specific gravity and iron content of rocks from the Red Mountain formation, Ala.....	4781
Sheldon Memorial Art Gallery, stone for construction, duty-free entry.....	14089, 17230, 17580
Shelf life of aqueous solutions of stannous fluoride.....	5911
Shell egg grading and inspection of egg products.....	11768
Shellfish:	
Alabama landings.....	3248, 12420
California landings.....	3299
firms canning fish and shellfish specialties, list.....	745
Florida landings.....	3512
Georgia landings.....	3556, 14263
interstate shippers, cooperative program for certification, current problems and proposed corrective actions, analysis.....	13394
Japanese research, survey.....	10555
Louisiana landings.....	3699, 17995
Maine landings.....	3701, 10551, 12415
Maryland landings.....	691, 3711, 15915
Massachusetts landings.....	3712, 14264
Mississippi landings.....	3728, 12421
New Jersey landings.....	3785, 17994
New York landings.....	3791, 15912
North Carolina landings.....	3798, 12418
Pacific Coast, commercial fisheries.....	12426
Rhode Island landings.....	3983, 12416
shippers, list.....	3311
South Carolina landings.....	4042, 12417
Texas landings.....	2334, 4081
Virginia landings.....	4133, 19177
see also Mollusks.	
Shells:	
firms manufacturing fresh-water mussel-shell products, list.....	757
oyster, products, firms manufacturing, list.....	755
Shells (aircraft):	
buckling load, imperfections, main contributor to scatter.....	19000
finite element solution for thin shells of revolution.....	14768
stiffened circular cylindrical shells, longitudinal-transverse bending.....	9625
Shells (structural):	
anisotropic, theory.....	13259
cylindrical—	
liquid-filled, equations of axially symmetric vibrations.....	14924
post-buckling behavior.....	11422, 13261
flexible, determination of stresses and deformations by photoelastic coatings application.....	14925
general theory, and its application in engineering.....	11423
liquid-filled, equations of transverse vibrations.....	14923
ring-stiffened cylindrical structure with various support conditions, vibration study.....	18743
thin shells of revolution, geometrical and inertial properties.....	20522

Entry	
Shelter belts:	
Central Great Plains, tree and shrub species under dryland cultivation.....	4221
tree planters' notes.....	791, 14335
8702-3, 12483-484, 14335	
Index.....	12483
Shelters (protective), see Protective shelters.	
Shelton, John E.:	
mercury.....	16630
tin.....	20515
Shenandoah National Park, atmospheric electric conductivity and field measurements.....	5612
Sheng, Chang, see Sing, Jeung.	
Shepard, Charles E., constricted-arc supersonic jet.....	7506
Shepard, Harold H.:	
fertilizer situation.....	7904
pesticide situation for 1963-64.....	16941
Shepherdson, Philip N., relief.....	6246, 13850
12189, 13850	
Sheppard, David, relief.....	8269, 12196, 13850
Sheppard, Harold L., Studebaker South Bend, Ind., plant closing report.....	13656
Sheridan, Eugene T.:	
fuel briquets and packaged fuel—minerals yearbook chapter.....	18665
producers, 1961.....	1401
peat.....	20494
Sheridan, William H.:	
double jeopardy and waiver in juvenile delinquency proceedings.....	10077
family court.....	8142
Sherlock, Dulcie A. S., relief.....	306, 1903
Sherman, May:	
cerebrovascular diseases.....	18814
drugs and heart disease, review of NHI research grants.....	11445, 16743
Sherman, W. C., Jr., stability of crater slopes, Project Sedan.....	122
Sherman Dam, design and construction, technical record.....	13433
Sherrod, John, popular books on nuclear science.....	13725
Sherwood, T. K.:	
saline water conversion by freezing, salt concentration at phase boundaries in desalination processes.....	10679, 10678
Shibley, Allen M., filament winding in military application.....	2255
Shielding:	
fallout shelters design and analysis.....	21048
high energy electron accelerator installations.....	14932
neutron self-shielding factors for multiple-body concentric cylindrical configurations.....	20572
radiation, AEC test structures, response studies.....	5992
radiation shields for thermal control of vehicles on sunlit side of moon.....	9573
radiosotope, design manual.....	13703
reactor-shielding physics, USSR studies.....	16145
spacecraft—	
for protecting humans, USSR study.....	7082
nuclear collision density of primary galactic protons in slab of aluminum, Monte Carlo calculation.....	9571
Shigella, ultrasonics alteration, USSR articles.....	10845
Shigo, Alex L.:	
collar crack of birch.....	21828
ring shake associated with sap-sucker injury.....	786
Shiloh National Military Park, general information.....	3066



# INDEX 1964

	Entry
Shin Sook (Renee) Whang, relief	1998
Shingles:	
red cedar, current industrial reports	11900
western redcedar shingle tow, toxic effects on Douglas fir seedlings	8656
Ship Structure Committee, serial no. SSC	1576-77, 5677, 7725-29, 9761, 13436-437, 16853, 18937-938
Shipbuilding:	
and conversion program, 1965	16783
Communist China	10742
construction differential subsidies—	
extend—	
hearings	10331, 12257
law	15387
reports	10237, 14051
program to aid domestic trades, hearings	19594
reimbursement to operators of extra expenses—	
law	17289
report	12049
construction reserve funds, extend time for commitment—	
hearing	2235
laws	1956, 19403
reports	489, 2058, 15632, 15712
control and stability in ship design, USSR	11167
fiberglass boat building, USSR study	16253
midship bending moments experienced in extreme regular waves—	
Mariner type ships	7726, 18937
experienced by models, summary of investigation	7728
experienced in tanker and destroyer models	7727
single-screw merchant ships, methodical experiments with models, series 60	13438
soundproofing problems, USSR studies	12775
Shipments:	
AID financed authorization awards, manufactured products, value	3227, 11887
manufacturers—	
chart book, 1953-63	15306
current industrial reports, 1947-63	189, 3706, 188
preparing shipments to Guinea	868
see also names or classes of articles shipped.	
Shippers, interstate shellfish, cooperative program for certification, current problems and proposed corrective actions, analysis	13394
Shipping:	
act of 1916, administration, hearings	19518
act of 1916, amend—	
hearings	4504, 6499, 15596
law	6186
reports	2206, 6274
airport cargo facilities	17020
cargo preference laws, implementation by administrative agencies, report	6464
code of Federal regulations	2325, 6681, 8578, 14255
competitiveness on sea lanes (remarks)	18655
foreign ports, code classification, schedule K	6049
foreign trade—	
summary reports, monthly	4113
waterborne, statistics, monthly report	4122
fresh approach to cargo handling problem (remarks)	20457
government supplies, etc., common faults and their remedies	1635
Guam, legislation, hearings	15596

	Entry
Shipping—Continued	
loading insert containers and cargo transporters	13681
maritime cargo transportation, future horizons (remarks)	18654
maritime industry, history (remarks)	12390
maritime services, radio stations on land, shipboard, etc., FCC rules and regulations	3990
nuclear power and merchant shipping	13724
ocean rate situation concerning Alaska (remarks)	21302
rate disparities (address)	4701
role of FMC in regulating (remarks)	10522
subsidies, U.S. and foreign countries	15400
weather service	1658
see also Transportation—Water carriers.	
Shipping clerks, occupations, employment outlook	7382
Shipping conferences, dual rate legislation, 1961-64, review, hearings	19518
Ships:	
analysis of acceleration and acquisition data relative to cargo loads	7729
bending-moment data from ships at sea, analysis	7725
cargo, radiotelephones on voyages in Hawaiian waters, permit	10826
Coast Guard—	
authorization for procurement—	
hearings	6368, 6501
law	8220
reports	6273, 6278, 6298, 6466
standard ship's organization and regulations manual for WAGL (180')	1852
State-by-State listing	10329
construction, see in main alphabet, Shipbuilding.	
construction-subsidized, amend contracts—	
law	1954
report	2059
construction-subsidized war risk insurance coverage, remove certain limitations—	
law	17337
report	15551
Defense Dept. military procurement, appropriations, 1965—	
hearings	6344, 8358
law	8227
reports	6282, 6289, 6319, 6469
design and controllable pitch propellers, USSR study	14488
dry-cargo ships operating in North Atlantic service, results from full-scale measurements of midship bending stresses	18938
earnings, relief from double taxation, agreement with Mexico	20834
electronic equipment, maintainability design criteria handbook for designers	20781
Federal item identification guides for supply cataloging	12297
supplements	3478
maneuvering board manual	9677
marine equipment, Federal item identification guides for supply cataloging	12297
supplements	3478
Mariner model, bending moments in extreme waves	7726, 18937
merchant and passenger vessels, load lines, regulations	221

# JANUARY-DECEMBER

Entry	Entry	Entry
Ships—Continued		Shirley, Lawrence E.:
13681 merchant fleets of world—		mineral industry of Florida..... 1409
18654 age, size, speed and draft by frequency groupings, Dec. 31, 1962, statistical analysis..... 2978		mineral industry of South Carolina..... 21706
12390 seagoing steam and motor, 1000 gross tons and over..... 14725		Shock (biological):
3990 merchant vessels, electrical equipment, Coast Guard approved list..... 19345		caused by compression of soft tissues under conditions of acute radiation injury, USSR study, causes and cure, NHI supported research grants..... 11445
13724 merchant vessels, United States, 1964—		effects of aerolons of different polarities, USSR studies..... 1031
21302 departmental edition..... 17895		Shock (mechanical):
4701 document edition..... 17449		close-in shock studies of nuclear explosion..... 5979
10522 midship bending moments experienced in extreme regular waves—		electronic designer's shock and vibration guide for airborne applications..... 1750
15400 Mariner type ship..... 7726, 18937		envelopes of blunt bodies at large angles of attack..... 3012
1658 models, summary of investigation..... 7728		isolator, synthesis..... 13149
7382 tanker and destroyer models..... 7727		see also Thermal shock.
19518 naval vessel loans now in existence, authorize extension, hearing..... 17866		Shock absorbers:
7729 oceanographic research, exempt from inspection laws, report..... 16790		novel, features varying yield strengths..... 16673
7725 oceanographic ship operating schedules, 1964..... 15733		one-time, break-up of metal tube..... 7486
10326 oceanographic vessels of the world..... 8537		Shock-layer radiation of blunt bodies at reentry velocities..... 9620
operating under bridges over navigable waters, approve certain practices, hearing..... 9671-72		Shock machines, sawtooth and half-sine shock impulses..... 5598
ownership changes, supp. to merchant vessels of U.S..... 2235		Shock mounts, frictional wedge, inexpensive and has good damping characteristics..... 14802
passenger vessels, rules and regulations..... 3750		Shock tubes, heat-transfer experiments to measure thermal conductivity of argon, evaluation..... 7522
propeller blades, determination of ice load encountered, USSR study..... 13816		Shock waves:
repairmen, safety program, report, 1963..... 18336		attenuation in elastic rigid foams..... 5898
security, Federal regulations..... 5422		chemical relaxation behind strong normal waves in carbon dioxide including interdependent dissociation and ionization processes..... 7529
service craft, Navy design manual, changes..... 17155		head shock wave in front of earth, effect on radiation belts, USSR study..... 5073
small passenger vessels, rules and regulations, code of Federal regulations..... 3202		hypersonic shock-heated flow parameters, as function of flight velocity and altitude..... 14900
temperature distribution and thermal stresses..... 10120		ionized radiating layer, solutions including reabsorption and foreign species effects and stagnation region heat transfer..... 1485
uninspected vessels, rules and regulations..... 13436		isentropic 1-dimensional unsteady expansions in equilibrium real air with particular reference to shock-initiated flows, charts for analysis..... 11420
USSR, motor cargo, with 4150-ton capacity..... 10121		jet breakup and applications to resonant combustion..... 18754
vessel entrances and clearances, summary report, 1963..... 9272		oblique-shock flow, ideal-gas tables for parameters in air..... 9592
see also Fishing vessels—Nuclear powered ships—Shipbuilding—Shipping—Warships—also names of ships.		oblique shock parameters, correlation for ratios of specific heats from 1 to 5/3 with application to real gas flows..... 11421
Ships Bureau:		photographed, ionospheric temperatures obtained..... 20963
journal..... 3290		radiation resisted, direct solution of governing equation..... 5519
scientific information activities..... 7623		spontaneous chain ignition of hydrogen with oxygen, USSR study..... 14444
shop practice suggestions..... 7811		strong plane, decay in ideal gas..... 20528
Technical Library, thesaurus of descriptive terms and code book..... 20779		see also Sonic boom.
Ship's serviceman, see Navy.		Shoebord, standard of trade..... 9631
Shipstructure, see Shipbuilding.		Shoemaker, Clarence R., amphipods from west coast of North America..... 7607
Shipyards:		Shoes, see Boots and shoes.
Poland, labor and docking facilities..... 11103		Shomura, Richard S., monofilament gill net fishing for skipjack tuna in Hawaiian waters, 1961-62..... 15916
safety data, maritime..... 18615-616		
shop practice suggestions..... 7811		
straight-time hourly earnings, indexes of change, monthly..... 3588		
see also names of shipyards.		
Shireman, Charles H., casework in probation and parole, some considerations in diagnosis and treatment..... 10076		

# INDEX 1964

	Entry
Shoop, Lucille T., rheumatic fever, glomerulonephritis, and streptococcal infections, selected references -----	1564, 15043, 18918
Shooting, rifle marksmanship in USSR, articles -----	12940
Shooting fields, northeast and Corn Belt, how to plan -----	20927
Shop practice, <i>see</i> Shipyards.	
Shopper's guide to U.S. grades of food -----	7920
Shopping, publications, list -----	15038
Shore, Diedre R., relief -----	8270, 12203, 13855
Shore operations, <i>see</i> Military art and science.	
Shore party and helicopter support team operations, Fleet Marine Force manual -----	5459
Shore patrol, Navy training course -----	21823
Shore protection, Benedict, Md., concrete block revetment -----	12336
Shoreline areas, preservation for public use and benefit, report -----	500
Short history of electrical communication -----	12386
Short term memory, non-equivalence of query and message items -----	9981
Shortcuts and special problems in aquifer tests -----	4806
Shorter workweek, selected references -----	1362
Shortleaf pine, <i>see</i> Pine.	
Shoshone County, Idaho: ore deposits of Coeur D'Alene district -----	15948
silver production, economic aspects in Coeur D'Alene mining region -----	5476
Shoshone Indians: Malheur Reservation, roll of eligible persons to receive funds from judgment -----	17323
law reports -----	12084, 15779
Shotgun Butte area, Wyo., geology -----	8757
Shotguns, gunshot injuries of the extremities, mechanism, USSR study -----	20024
Shoub, Harry, literature on safety of residential chimneys and fireplaces -----	3044
Shoulders, Eugene, root-pruning southern pines in nursery -----	2391
Show Low, Ariz., soil survey of area -----	13456
Shrimps: Betaeus, of Pacific Coast -----	7608
breaded, current fisheries statistics, explorations off Vancouver Island, Oct.-Nov. 1962 -----	8592
19723	
firms canning, list -----	749
frozen breaded, individually frozen peeled and deveined, handling and packing -----	6710
Galveston Biological Laboratory research 1963 -----	12424
Gulf Coast data -----	3562, 6701
landings -----	4035, 12422
northeastern Pacific Ocean, commercially important pandallid shrimps, distribution and abundance -----	8617
radiation pasteurization -----	13706
shrimp farming -----	6715
utilization of otter-trawl vessels in Gulf of Mexico, 1959-61 -----	14271
Shrine, Mystic, <i>see</i> Ancient Arabic Order of Nobles of Mystic Shrine.	
Shrinkage, drying, lightweight and normal-weight concretes -----	9634
Shriver, Robert S., nomination, hearing -----	17886

	Entry
Shrubs: ornamental -----	24
for southern Great Plains -----	7921
reducing salt injury in West -----	
seed and planting stock, commercial dealers, directory -----	791
shelterbelt species under dryland culture, Central Great Plains -----	4221
wet slash pine sites, controlling -----	8670
Shu Hsien Chang, <i>see</i> Chang, Shu Hsien.	
Shuford, Emir H., Jr., Bayesian learning processes -----	64
Shuler, R. L., factors affecting oxygen production by algae in small culture unit -----	5611
Shumagin Islands, king crab movements -----	6728
Shumway, Robert H., radionuclide analysis of gamma-ray spectra by stepwise multiple regression -----	9713
Shungnak River, glacial, eolian, and alluvial history of parts of quadrangle, reconnaissance study -----	18111
Siberia: hydroelectric power development -----	21420
plant cover, scientific coordination conference report -----	2558
structure of earth's crust, geophysical investigations, USSR study -----	6909
tractor, USSR industrial development, translations -----	20306
west, oil basin, USSR book review -----	11105
zoologists, 2d meeting -----	2620
Sick: acute and chronic conditions, incidence, U.S. -----	
current estimates, July 1962-June 1963 -----	9733
current estimates, July 1963-June 1964 -----	21859
acute conditions, incidence and associated disability, U.S., July 1962-June 1963 -----	13423
bed disability among chronically limited, United States, June 1957-June 1961 -----	18925
community health services for chronically ill, PHS project grants program -----	15166
financial protection for Federal employees -----	11945
foodborne illness, you can prevent -----	7712
illness and treatment in various climatic conditions, USSR -----	20228
income-loss protection against short-term sickness, 1948-62 -----	5690
publications, price list -----	5643
Sick leave, <i>see</i> Leave of absence.	
Sideslip (aircraft), <i>see</i> Angle of sideslip.	
Sidewinder missiles, <i>see</i> Missiles.	
Siding, asphalt and tar, current industrial reports -----	3390, 8113
Siegel, Davey E. S., relief -----	6427, 8209
Siegel, Gordon S., remarks, June 23, 1964 -----	13034
Siegel, Jacob S., projections of population of United States by age and sex, 1964-85, with extensions to 2010 -----	13763
Siegel, Michael H., spectral bandwidth effect on color discrimination -----	5468
Siegel, Robert, wall temperatures in tube with forced convection, etc -----	9568
Siegel, Victor, space, the new frontier -----	21739

## JANUARY-DECEMBER

	Entry		Entry
		Slegert, Clifford E., time response of liquid-vapor interface after entering weightlessness.....	18782
24		Siemens, Richard E., columbium-hafnium equilibrium diagram.....	16642
7921		Sierra Ancha Experimental Forest, habitat relations of vertebrates.....	12479
791		Sierra Leone, investment guarantees, agreement.....	5701
4221		Sierra Nevada batholith, recent work across central part.....	810
8670		Sierra Nevada Mountains: chemical composition of snow.....	15954
64		snowmelt hydrology of Sierra Nevada stream.....	6826
5611		sources of mineral constituents in water from granitic rocks.....	12513
6728		Sierra Talc and Chemical Co., President's E award for excellence in exporting (remarks).....	17160
9713		Sievers, Patricia T., automated routines in technical services.....	7967
18111		Sigelbaum, Benjamin B., testimony, hearings.....	8456
21420		Sight: color vision, USSR studies.....	14525
2558		eye disorders, summary of progress.....	18816
6909		legal blindness and blindness, interviewing guides for specific disabilities.....	8501
20306		night vision sensitivity during prolonged restriction from sunlight.....	5465
11105		recovery from brief exposures to very high luminance levels.....	19177
2620		vision testing methods and binocular visual acuity findings, by age, sex, and race among adults aged 18-79 years, United States, 1960-62.....	13424
9733		visual impairments, interviewing guides for specific disabilities.....	8502
21859		vision testing methods and binocular visual acuity findings, by age, sex, and race among adults aged 18-79 years, United States, 1960-62.....	14995
13423		Signal generators: AN/URM-25D and AN/URM-25E RP set, instrument calibration procedures, technical manual.....	11505
18925		AN/URM-64, (TS-419/U) AN/URM-64A, (TS-419A/U), instrument calibration procedure, technical manual.....	11519
15166		A/NUSM-44 and AN/USM-44A: illustrated parts breakdown.....	15013
11945		operating instructions, handbook.....	15010
7712		overhaul instructions.....	15011
20228		service instructions.....	15012
5690		RF, AN/URM-25F, instrument calibration procedure technical manual.....	11506
5643		SG-403 URT or Panoramic Radio Products TTG-2, instrument calibration procedure, technical manual.....	11500
0, 8113		Signal lights, see Lights and lighting.	
7, 8209		Signal systems: Federal item identification guides for supply cataloging.....	12293
13034		supplements.....	3474
		Signals: command, ring counters, advance or retard sequence.....	16675
13763		microwave, modified filter prevents conduction along high-voltage power supply leads.....	13162
5468		multipath, optimum design.....	17005
9568		train control, statistics.....	2465
21739		see also Communications—Radio signals.	
		Signs, structure of construction, analysis, USSR.....	9125
		Signs (advertising): industry, national apprenticeship and training standards.....	5921
		Signs (road): standard highway signs.....	7716
		Signs (traffic): civil defense, highway signs for survival.....	6066
		Sikich, Matthew G.: mineral industry of Illinois.....	1410
		mineral industry of Minnesota.....	1416
		Silica, anionic flotation from iron ores, western Mesabi and Menominee Range.....	9516
		Silicates: alkali, forms durable fireproof paint.....	13209
		systematic analysis, methods and problems.....	10633
		X-ray diffraction and microscopic data.....	11334
		see also Iron phyllosilicates.	
		Silicides, coatings on molybdenum, effect of stresses on quality, USSR study.....	1012
		Silicon: high-purity, mineral industry survey, quarterly.....	4036
		minerals yearbook chapter.....	18707
		power silicon gate controlled switch development.....	18720
		semiconductor materials, bulk resistivity measurement for electron devices, bibliography.....	21785
		zone-refined P-type, in-pile Hall coefficient and conductivity measurements.....	5591
		Silicon carbide, balls, surface failure in rolling contact at temperatures to 2000°F.....	18783
		Silicon nitride, fibrous, synthesis and properties.....	14749
		Silicosis in metal mining industry, 1958-61, reevaluation.....	15066
		Silk, woven goods finished, current industrial reports.....	13753
		Sillimanite, high-temperature heat contents and entropies.....	7448
		Sil Murk, Ariz.: relocate.....	17321
		law.....	15492
		reports.....	15778
		Silt sediment discharge during floods in eastern Nebraska.....	18121
		see also Sedimentation and deposition.	
		Silurian period, Helderberg Group and position of Silurian-Devonian boundary in North America.....	6799
		Silver: exploration, financial assistance (remarks).....	1396
		films, vacuum performance of ball bearings lubricated with.....	13232
		mine production, report, monthly.....	4037
		minerals yearbook chapter.....	21720
		ores and concentrates, marketing in U.S.....	13105
		production and consumption, report, 1962.....	9529
		production, economic aspects, Coeur D'Alene mining region, Shoshone County, Idaho.....	5476
		silver-cadmium battery development program.....	20520
		United States movements.....	4123
		summary 1963.....	6051
		Silver (money): coins, content, redefine, hearings.....	10411
		Mint Bureau report, 1963.....	9529
		Silverstein, Bennett L., naval hydrodynamics symposium, propulsion, hydroelasticity.....	18855



# INDEX 1964

Entry	Entry
Silverton, Colo., rhodonite ores, metallurgical studies.....	13118
Silviculture, concentrated test on sugar maple.....	6748
Silviculture, see Forests and forestry.	
Simmonds, F. A.: nonchlorination bleaching of hardwood neutral sulfite semichemical pulps.....	18057
strength of some hardwood pulps and their fiber fractions.....	12444
Simmons, Lansing, G., natural function tables for computing geographic positions on international ellipsoid.....	10117
Simmons, W. P., Jr., hydraulic design of transitions for small canals.....	11593
Simon, G. A., new product development and sale, bibliography.....	5678
Simon, George M., testimony, hearings.....	6526
Simon, Kenneth A., digest of educational statistics, 1964.....	17914
Simplified methods for determining needs.....	6605
Simplified practice recommendations.....	1497, 5547-48, 11435
Simpson, Marion E., cellulose decomposition by Aspergillus.....	7951
Simpson area, Alaska, core tests.....	19782
Sims, Joseph L.: tables for supersonic flow around right circular cones.....	14796
small angle of attack.....	11360
zero angle of attack.....	11360
Sims, Paul K.: geology of uranium deposits in Front Range, Colo.....	18106
geology of uranium, etc., deposits, central part of Front Range mineral belt, Colo.....	806
Simulation and control of physical and chemical systems, USSR.....	18331
Simulation circuits, see Circuits.	
Simulation of helicopter and V-STOL aircraft.....	13322, 21826-827
Simulators: digital techniques for radar land mass simulation.....	1528, 11489
gravity, of lunar environment, for studies of man's self-locomotion.....	9581
helicopter battery service.....	18810
human factors technology in design of simulators for operator training.....	7648
internal environmental, for man-machine system.....	15004
reentry environment, operating capabilities.....	18723
simulation system, programming design manual.....	11490
sonar operator trainers, requirements.....	16798
studies, manual control of vehicle attitude using on-off reaction control system.....	1473
see also Flight simulators—Space simulators.	
Simulidae, see Flies.	
Sinclair, John H.: bend transition temperature of arc-cast molybdenum and molybdenum-0.5-titanium sheet, etc.....	20583
effect of 2 braze coatings, etc., on 1200° F stress-rupture strength of L-605, etc.....	1454
Sinclair Oil Companies, wage chronology, 1941-63.....	20433
Sinev, N. M., address, Aug. 16, 1964.....	20026
Sing, Jeung, relief.....	444, 1877
Sing, Rafael Chang, see Sing, Jeung.	
Singer, Joseph M., ignition of coal dust-methane-air mixtures by hot-turbulent-gas jets.....	7447
Singers, occupations, employment outlook.....	7380
Singh, Jag J., tables of X-coefficients and A factors for triple angular correlation analysis.....	18780
Singleton, Carey B., Jr., agricultural economy of Tanganyika.....	17910
Singman, David, flow-through porous electrodes for redox couples.....	7664
Sinha, Nareesh K., nonlinear adaptive control systems with storage.....	14777
Sinkiang Province, China: Kazakhs and other minorities, suppression by Chinese Communists.....	989
Russo-Chinese treaties and agreements, 1851-1949.....	12863
Uigur Autonomous Oblast, Kirgiz population ethnographical information.....	11192
Sino-Soviet bloc, see China—Union of Soviet Socialist Republics.	
Sintering: aluminum powder— SAP-2, brazing, USSR study.....	10975
spot welding with D16AT and AMg6 alloys, USSR study.....	2790
weldability of heat-resistant material by fusion, USSR study.....	20322
new process adjusts magnetic value of ferrite cores.....	13202
pyrrhotite calcine.....	1435
see also Lime-soda sintering.	
Sioux Falls, S. Dak., occupational wage survey.....	7409
Sioux Indians: Cheyenne River Tribe, South Dakota lands in trust, permit sale.....	17277
law.....	15722
report.....	1923
Devils Lake Tribe of Fort Totten Indian reservation, donating land to—	496
law.....	17342
reports.....	15491, 15781
Rosebud Tribe, placing in trust status certain lands—	17322
law.....	12105
report.....	1925
Rosebud Tribe, sale and exchange of isolated tracts of tribal land—	499
law.....	1925
report.....	499
see also Oglala Indians—Santee Indians.	
Sires, see Bulls.	
Sirken, Monroe G.: comparison of 2 methods of constructing abridged life tables by reference to standard table, guide to United States life tables, 1900-59.....	7704
1562	
Sirte, Libya, ground water conditions in area.....	6824
Siry, Joseph W., attitude determination for TIROS satellites.....	18219
Sisal, see Sisal hemp.	
Sisal hemp: disposal from national stockpile—	19425
law.....	17529, 17851
reports.....	21339
stockpiling fibers, questionable need, GAO report.....	

Entry

7447

7380

18780

17910

7664

14777

989

12863

11192

10975

2790

20322

13202

1435

7409

17277

15722

1923

496

17342

15781

17322

12105

1925

499

7704

1562

6824

13219

19425

29, 17851

21339

Entry

Site indexes:	
estimating system from stem analysis data	8685
New Jersey sweetgum stands related to soil and water-table characteristics	784
Sites:	
airport, selection, bibliography	6607
Federal buildings, land acquisition, how and why, GSA information	4774
Industrial, how to make survey	1755
Sitka spruce, <i>see</i> Spruce	
600-A band of helium	13644
Size cues and adjacency principle	13730
Size of place, social and economic data by size of urbanized area and size of urban place	11913
Skagerrak, northern and eastern shores, sailing directions, change	1519
Skids (aircraft):	
cermet materials for X-20A nose gear skid, friction and wear properties	5877
wire brush constructed with René 41 bristles, friction and wear property, coefficients	19134
Skiing, <i>see</i> Skis and skiing	
Skilled trades, <i>see</i> Occupations	
Skin:	
cancer	15050
homotransplants, preserved by various means, criteria of biological evaluation, USSR study	20005
potentials, electrophysiologic characteristics and interpretation	5905
rabbits, morphological changes from local ultrasonic irradiation, USSR study	1030
skin vision, USSR studies	20254
temperature reaction during irradiation with low intensity microwaves, USSR study	7063
Skin boats, <i>see</i> Boats	
Skin diseases, radiation dermatitis, determination of trace elements, USSR study	16180
Skin diving, <i>see</i> Diving	
Skin friction (aircraft):	
ogive cylinder, drag due to surface roughness	3023
turbulent, at Mach 3, effect of air injection through porous surface and through slots	18757
Skin grafting homotransplants of rabbits, prolonging life span by means of alkylating substances	10916
Skinner, Selder W., agricultural economy of Ivory Coast	10456
Skipjack tuna, <i>see</i> Tuna fish	
Skipjacks, world resource	8599
Skis and skiing:	
national forests, America's playgrounds	39
northeast North America, market	8019
Sklopje, Yugoslavia, earthquake tragedy, U.S. aid allocation, hearing	386
Skolmen, Roger G.:	
Robusta eucalyptus wood, its properties and uses	18082
wood density and growth of some conifers introduced to Hawaii	19749
Skolnik, Alfred M.:	
contributions, etc., State and local gov't retirement systems	13455
coverage of full-time State and local government employees by group life insurance and health or hospital insurance, Oct. 1962	20800
workmen's compensation payments and costs, 1962	3134

Entry

Skull, closed cranio cerebral injury associated with radiation sickness, morphological changes in cat brain following, USSR study	7320
Sky, temperatures at millimeter-wave frequencies	19171
<i>see also</i> Airglow	
SL series	701-760, 4738-39, 8609-16, 15926-928, 18002-28, 19735-736
SL-1, <i>see</i> Reactors (atomic)	
Slabs:	
minimum horizontal dimensions for infinite slab behavior determination, model study	17050
uses for	12452
Slaby, Jack G., laminar, etc., hydrogen heat transfer and friction coefficients over parallel plates	18763
Slag:	
coal ash, measurement and significance of flow properties	9495
composition, effect on melting of electrode of large section in electroslag process, USSR study	1237
copper reverberatory, smelting to recover iron of low copper and sulfur content	14762
galvanizers' dross, use for zinc recovery	11323
iron-blast furnace, minerals year-book chapter	18708
molten, physical chemistry, proceedings of all-Union conferences	5954
titaniferous fluidized-bed chlorination	1436
titanium, investigation of electric melting, USSR	5238
Slag (in boilers):	
marine boilers, bench scale apparatus for formation and removal	7649
Slash, <i>see</i> Forests and forestry	
Slash pine, <i>see</i> Pine	
Slater, Daniel W., winter-run Chinook salmon in Sacramento River, Cal., etc.	8619
Slaughtering:	
cattle killing-floor systems and layouts	9952
commercial livestock slaughter and meat production, monthly report	3342
commercial slaughter, meat and lard production, etc., 1963	11647
lamb and mutton on farm	9941
Slavin, Joseph W.:	
irradiated-pasteurized fishery products	8087
low-level radiation preservation of fishery products	8083
Slayton, William L., statement, Nov. 21, 1963	9854
Sleep:	
electric sleep treatment, effectiveness in certain occupational diseases	966
electrically induced, methods used in administration, USSR study	7300
Soviet research on teaching during sleep	18198
Sleeping Bear Dunes National Lakeshore, establish, report	2224
Sleeping Bear Dunes National Lakeshore Advisory Commission, establish, report	2224
Sleeve and cutter simplify disconnecting welded joint in tubing	18170

# INDEX 1964

Entry	Entry
Slomp, Wayne S., preoxidation treatments effects on emittance of Inconel, etc.-----	16684
Slidefilms, <i>see</i> Filmstrips.	
Sligh, John L., jr., galvanostagometry, new technique based on negative pressure of liquids for investigating electrochemical phenomena at electrode-----	5894
Slimes, <i>see</i> Metallurgical slime—Phosphate slimes.	
Slinney, Harold E., fused fluoride coatings as solid lubricants in liquid sodium, hydrogen, vacuum, and air-----	16686
Slip laws, <i>see</i> Law.	
Slip rings, <i>see</i> Electric slip rings.	
Slippers, <i>see</i> Boots and shoes.	
Slipstream, <i>see</i> Propellers.	
Slopes, development theory, lithologic variations-----	12509
Slots, converging and diverging, flux patterns resulting from free-molecule flow-----	20581
Slovakia, <i>see</i> Czechoslovakia.	
Slovenia, People's Republic, agriculture, regional aspects-----	18352
Sludge, <i>see</i> Sewage.	
Slums:	
clearance—	
local public agency letters-----	3692
urban renewal manual-----	4126
Slurries, clay, electrical dewatering-----	16632
Smal, Anna, relief-----	1863, 2143
Smal, Jan, relief-----	1863, 2143
Small, E., summary of laws and regulations affecting cheese industry-----	4195
Small business, <i>see</i> Business.	
Small Business Administration:	
appropriations, 1964—	
hearings-----	515
law-----	1974
reports-----	511, 2082
appropriations, 1965—	
hearings-----	10288, 15791
law-----	17386
proposal-----	19530
reports-----	10245, 21193, 21233
business loan activities, need for better supervision and management, GAO report-----	6772
business loans, credit requirements, loan policies, etc-----	20784
change name, hearings-----	2109
disaster loans to restore or replace businesses and homes-----	20785
local development company loans, economic growth, job creation-----	18940
press releases-----	3924
program and services for small business, publications, sale lists-----	11602
publications, free publications currently available-----	1580, 11603
report, 1963-----	16856
review of operations, 1963, hearing-----	6527
revolving fund, increase—	
hearings-----	2109
law-----	6175
reports-----	467, 4464
small business investment companies licensed-----	1581
small business investment program, hearings-----	14018
small business participation in Government procurement, 1963, conference-----	12283
starting and managing series-----	3127, 7731
what it is, what it does-----	18942
Small Business, Select Committee on, House:	
committee prints-----	8402, 12157
hearings-----	415, 6370, 8401, 12155-156, 14018, 21214
investigations and studies, expenses, report-----	6307
publications, list, 77th-88th Congresses, 1941-63-----	12157
report-----	8330
Small Business, Select Committee on, Senate:	
annual report-----	14109
committee prints-----	2248, 12283-284
hearings-----	6527, 8437, 17891-892, 19607-608, 21244
investigations and studies, small and independent business problems, expenses, report-----	6460
Small plants, <i>see</i> Plants (industrial).	
Small town organizes basic services for its aging-----	15171
Small unit tactics, including communications-----	19214
Smaller communities program-----	4660
Smaller War Plants Corporation, records, preliminary inventory-----	20633
Smallpox, vaccination, international certificate requirement, poster-----	5665
Smelting:	
beryllium electrorefining, prototype cell operation-----	16639
cadmium refining by amalgam electrolysis-----	7434
copper precipitator dust, laboratory investigation-----	5483
copper reverberatory slags to recover iron of low copper and sulfur content-----	14762
electric smelting of titaniferous iron ores from Alaska, Montana, and Wyoming-----	18681
electronic, USSR study-----	12710
electrorefining of columbium-----	18689
electroslag, for use in machine building-----	9013
high-temperature alloy smelting, etc., USSR studies-----	2704
iron ore prerduced pellets-----	20499
molten-salt electrorefining of uranium-----	18690
rare-earth elements, influence on high-temperature nickel-base alloys, USSR study-----	1149
titanium electrorefining, transfer of selected metals-----	11341
titanium-refining cells, development-----	11338
Smith, Arthur J., jr., Halphen's method for secular perturbations in motions of celestial bodies-----	14902
Smith, Barbara A., principal sources of statistical data on textiles and apparel-----	17069
Smith, C. R., measurement of blood pressure in human body-----	11363
Smith, Charles C., jr., flight tests of vectored-thrust jet VTOL transport airplane-----	16681
Smith, Charles W., making your sales figures talk-----	5683
Smith, Clarence R., tips on fatigue-----	13367
Smith, Edgar D., evaluation of UH-1D 48-foot rotor with Kellet 60-gallon external fuel tanks-----	13622
Smith, Floyd F., controlling insects on flowers-----	19063
Smith, Fred M., calibration of Langley hotshot tunnel with some real-gas charts for nitrogen-----	5511
Smith, G. D., designing toroidal inductors with dc bias-----	14861

# JANUARY-DECEMBER

Entry	Entry
	Smith, G. L., cost of cotton insect control with insecticides at Tallulah, La.-----
12157	13565
6370,	Smith, G. Louis, magnetically induced eddy-current torques effects on spin motions of earth satellite-----
21214	11389
6307	Smith, G. S., cardiovascular effects of refeeding stress following starvation-----
12157	7984
8330	Smith, George I., character and distribution of nonclastic minerals in Searles Lake evaporite deposit, Calif-----
14109	19777
283-284	Smith, Gerald L.: midcourse guidance using radar tracking and onboard observation data-----
7, 8457,	9597
21244	Monte Carlo computation of statistics of mid-course velocity corrections for lunar mission-----
6460	11416
	Ranger VII, photographs of moon, pt. 1: Camera A series-----
15171	21741
	secondary errors, etc., in optimal estimation of space vehicle trajectories-----
19214	7528
4660	Smith, Grace, and others, relief-----
20633	12188, 13549
5665	Smith, Harold M., hydrocarbon-type relationships of Eastern and Western Hemisphere high-sulfur crude oils-----
16639	21712
7434	Smith, Howard D., segregation of red salmon in escapements to Kvichak River system, Alaska-----
5483	10573
	Smith, Hugh M., how color of red delicious apples affects their sales-----
14762	4208
	Smith, Jackie B., relief-----
18681	8267, 13864, 14042
12710	Smith, Jerry L., strength-moisture-density relations of fine-grained soils in vehicle mobility research-----
18689	6599
9013	Smith, John W., specific-gravity to oil-yield relationships for black shales of Kentucky's New Albany formation-----
2704	20507
20499	Smith, Keith A., exploratory fishing for Maine herring-----
18690	8620, 10571
	Smith, Kirkpatrick & Co., Inc., President's E award for excellence in exporting (remarks)-----
1149	19362
11341	Smith, Lee R., and son, relief-----
11338	6236
14902	Smith, Lloyd F.: care of pine seedlings used in breeding at Institute of Forest Genetics-----
17069	2386
11363	controlling shrubs on wet slash pine sites-----
16681	8670
5683	Smith, Margaret, how to tailor a woman's suit-----
13367	19074
13622	Smith, Michael B., basic data on economy of Chad-----
19063	14377
	Smith, Noble F., and wife, relief-----
	12179, 13853
	Smith, Patsy B., ecology of benthonic species-----
	14342
	Smith, Preston, Jr., improved rapid method for determining total lipids in fish meal-----
	19724
	Smith, Rex O., ground-water resources of South Platte River basin in Adams and Weld Counties, Colo-----
	12519
	Smith, Richard G., relief-----
	17701
	Smith, Richard J.: reactor containment-----
	5973
	reactor safety-----
	15284
	Smith, Robert D., electrical resistivity of cerium metal from 4° to 300°K-----
	14761
	Smith, Rufus P., floods of Apr.-May 1955 in Louisiana, etc-----
	2430

Smith, Thomas B., operating procedures and labor utilization in cottonseed oil mills, 1961-62 season-----	17905
Smith, W., temperature, pressure, density, and wind measurements with rocket grenade experiment, 1960-63-----	20621
Smith, W. L., Jr., reduction of post-harvest decay of peaches and nectarines with heat treatments-----	13586
Smith, W. O., turbulence in ground-water flow-----	6805
Smithsonian contributions to astrophysics-----	13449, 18943
Smithsonian Institution: appropriations, 1964, deficiency, hearings-----	10285
appropriations, 1965-----	6338, 8436
law-----	13904
reports-----	8288, 8420, 13951
board of regents executive committee, report, 1963-----	5685
employment of aliens-----	17407
law-----	17551, 17806
reports-----	17551, 17806
History and Technology Museum, dedication-----	9649
National Air and Space Museum, naming and construction-----	15824
hearing-----	15692
report-----	15692
policing of buildings and grounds, amend act-----	12282
hearing-----	17250
law-----	379, 15693
reports-----	5685
report of secretary, 1963-----	8129-30,
Smithsonian miscellaneous collections-----	19859, 20793-704, 21869-871
Smithtown, N.Y., hydrogeology of area-----	10655
Smode, Alfred F., human factors technology in simulator design-----	7648
Smoke trails, for wind-shear measurements, evaluation of chemicals-----	20586
Smoking: smoking and health-----	
authorize research by Agriculture Dept-----	8353
hearings-----	4484
report-----	11568
bibliography, 1958-63-----	5664
Surgeon General's Advisory Committee report-----	16845
excerpts on smoking and oral cancer-----	21858
summary-----	19641
what part will schools play?-----	14957
smoking and the heart-----	19312
smoking, health, and you, facts for teenagers-----	17119
your teenage children and smoking-----	
Snake Indians, see Shoshone Indians.	
Snake River and Valley: fish passage reports, Bonneville, The Dalles, McNary and Ice Harbor Dams-----	613, 17936
floods, magnitude and frequency-----	6822
ground water in basin, irrigation use-----	15956
surface water, compilation of records, Oct. 1950-Sept. 1960-----	4821
SNAP (systems for nuclear auxiliary power), see Atomic energy.	
Snively, P. D., Jr., geologic sketch of northwestern Oregon, etc-----	18112

Do not order from index; see indicated entry

Page 585



# INDEX 1964

	Entry		Entry
Sneezeweed, livestock poisoning in Western States, reducing losses	20915	Snow—Continued	
Sniegocki, Richard T.: artificial recharge through wells in Grand Prairie region, Ark.	817	visual resolution and optical scintillation	12344
hydrogeology of Grand Prairie region, Ark.	4809	zone lands, managing for water, California	8688
Suleszko, S. F., basic list of publications in English on fish diseases and parasites	15921	Snowdrift Mountain: phosphoria formation, minor elements in bedrock soil, etc.	801
Snipes, hunting, possession, transportation, importation, Federal regulations, 1964-65	15925	southeastern Idaho, geology	12504
Snodgrass, Raymond J., concept of project management	20987	Snyder, Curtis D., Project Fire reentry stage after reentry-pack-age separation	5515
Snoqualmie National Forest, report, 1962	2392	Snyder, Fred, radioassay of thin-layer chromatograms, blueprints for zonal scraper	11864
Snouse, Thomas W., sputtering at oblique angles of ion incidence	9595	Snyder, George L., petrochemistry and bedrock geology of Fitchville quadrangle, Conn.	18109
Snow, Donald L., space planning principles for biomedical research laboratories	1563	Snyder, Norman R., relief	15475
Snow: bibliography with abstracts	8511	Snyder, Richard G.: biomedical research studies in acceleration, impact, etc., comprehensive bibliography	13732
cumulative index	15866	human survivability of extreme impacts in free-fall	1791
Camp Century movement record—chemical composition, northern Sierra Nevada and other areas	6588	So you're going to hire the mentally restored	7369
deposition and melt under different vegetative covers in central New York	15954	So you're going to hire the mentally retarded	7370
dynamic response to high rates of loading	8649	Soap: economic potential, made from fats and oils	10455
Federal-State-private cooperative surveys—	12346	effects of miscellaneous wastes on mesophilic activated sludge	20973
Arizona	4137	industry, review of 1963, outlook for 1964	4329
Arizona, summary 1938-64	18955	oil-soluble, solubility theory	13334
Colorado and New Mexico	4138	Soapstone, minerals yearbook chapter	18709
Colorado and Wyoming, special report	13460	Sobey, Margot R., relief	430
Colorado, early season report	3141	Social insurance, programs throughout the world, 1964	15088
Colorado, Rio Grande, Platte and Arkansas drainage basins	4138	Social Insurance and Taxes Committee, report	1545
Idaho	4139	Social problems, see Social work and problems	
Montana	4140	Social progress and philosophy, USSR	8879
Nevada	4141	Social progress program, Inter-American, see Latin America	
Oregon	4142	Social psychology, see Psychology	
Oregon, summary, 1928-61	3136	Social sciences: and Communism, USSR book review	5140
Utah	4143	application of game theory to, bibliography	9784
Washington State	4144	bibliography of periodicals and monograph series—	
western United States, including Columbia River drainage in Canada	4145	Finland, 1950-62	186
Wyoming	15090	Hungary, 1947-62	6047
Federal-State-private cooperative snow surveys, and soil moisture measurements—		Norway, 1945-62	8134
Montana, including Alberta, Saskatchewan, British Columbia, Idaho, and Wyoming, 1922-64	18950	Poland, 1945-62	15324
western United States, including Columbia River drainage in Canada, 1962-63 season	15089	Turkey, 1950-62	8133
flow of air into partially-cased snow trench	19650	economic and social implications, current projects, 1963	14987
forces on sphere accelerating in viscous fluid	15865	fighting task of workers	5217
maximum water equivalent values of March snow cover in North Central U.S. frequency	21922	foreign bibliographies series	186
on earth's surface	21278	6047, 8133-34	15324
snowmelt hydrology of Sierra Nevada stream	6826	introductory USAFI course, teacher's guide and key	8462
surveys, Alaska	4035	proportionality of social processes, East German study	10837
trafficability—		research studies in progress, lists—	
in trenches	8512	Africa	20816
Waterways Experiment Station research capability	635	American republics	20817
undersnow structures, N-34 radar station, Greenland	17941	Asia	20813
variable permeability, isothermal flow of air through snow pack	19649A	international affairs	20818
		Middle East	20815
		USSR and eastern Europe	20812
		western Europe, Great Britain, and Canada	20814
		social science and your career	20446

# JANUARY-DECEMBER

	Entry
Social sciences—Continued	
USSR—	
methodology	9254
social science, textbook for secondary schools	12945
<i>see also</i> Sociology.	
Social scientists, employment outlook	9409
Social security:	
act—	
amend—	
laws	13898, 17241, 21142
reports	8304, 8308, 8316, 12229, 12232, 17833.
amendments of 1964—	
hearings	17876
reports	13979, 15486, 17831
amendments, prevention of mental retardation through improved services	8143
State public assistance plans, staff development provisions	12355
are you getting credit due you?	3132
beneficiaries who have lived to 100, America's centenarians	18946
benefits—	
earned by spouses of retired railroad employees not to be deducted from railroad retirement act annuities—	
hearing	19606
reports	17583, 17611
for adults disabled in childhood	1588, 16861
how to estimate amount, how you earn them, etc.	11609
outside United States	7741
replacement for lost earnings	7737
services for children under title 5	6057
bulletin	4039
statistical supplement, 1962	18948
career opportunities	7732
clergymen, general information	9771
commemorative postal card (poster)	18880
coverage for—	
engineering aides employed by soil and water conservation districts in Oklahoma, validate, amend act—	
law	21142
reports	8316, 17833
household employees	7735
household workers	9770
disability insurance program, facts and figures	1585, 15083
disability provisions, how disabled must you be?	1594
earnings record	5687, 18947
employer's tax guide	6837
equality of treatment of nationals and nonnationals, ILO convention adopted	1994
essentials	9773
fact sheet, services for children	6057
farmers, self-employed—	
are you getting your social security credit?	1587, 21875
information	5688
financing your social security benefits	1586, 15084
if you work while you get social security payments	11608
information for crew leaders and farmers	20797
Joe Wheeler finds job and learns about social security law provisions	13452
law, old-age, survivors and disability provisions	13452
laws, compilation, print as House document, report	19476

	Entry
Social security—Continued	
ministers, elect coverage, extend time, amend act—	
law	21142
reports	8316, 17833
non-United States citizen employees, coverage, agreement with Philippines	8147
old age, survivors and disability insurance, long range cost estimates under 1956 amendments	9769
program, medical care for the aged, hearings	6371
programs in United States	18949
programs throughout the world, 1964	15088
publications, list	13390
research and statistics notes	1589, 3133-34, 5490-91, 7739-40, 9774, 13454-455, 15086-87, 16862, 20799-800, 21876.
right to question decision made on your claim	20798
rulings on Federal old-age, survivors, and disability insurance	4040, 7742
self-employed, information	7736, 21872
self-employed workers, employment and earnings	16863
service area directory	1590
what you can expect	15085
what you need to know about disability insurance benefits	21873
your check	11610
your social security, Federal old-age, survivors, and disability insurance	3131, 9772, 21874
<i>see also</i> Old age, survivors and disability insurance.—Public assistance.	
Social Security Administration:	
Accounting Operations Division—	
electronic data processing	13451
recordkeeping	13453
actuarial study series	9769
cooperative research and demonstration projects in aging	7548
regulations	7738
research reports and research and statistics notes, index	7733
supervisory training course, interviewing and counseling	15082
Social service, <i>see</i> Social work and problems.	
Social studies, <i>see</i> Social sciences.	
Social work and problems:	
American social and economic revolution, for whose benefit? (address)	18907
ARA research program	13664
children receiving aid to families with dependent children, coordination in location of absent parents, report of meeting	4672
converging trends, emerging problems	11713
Cooperative Research and Demonstration Grants Program, policy, procedures, etc.	20880
economics and public welfare (paper)	7373
field instruction for graduate schools, summer employment of undergraduates, etc., guides	13533
grants for research and demonstrations in social welfare	21924
group services in public welfare, guides for administration and program development	19666
Mall, public health and social affairs, seminar reports	21583
mentally retarded, report of President's Panel	15029

# INDEX 1964

Entry	Entry
Social work and problems—Con.	Socialism—Continued
national welfare needs, role of voluntary agencies, 6th Inter-Faith Consultation, minutes—	Socialist and capitalist societies development, USSR study—
12532	21508
projects aided under Cooperative Research and Demonstration Grants Program—	Socialist countries, economic development, determination of level—
15170	2718
protective services for elderly people—	Vietnam, socialist economy achievement campaign—
13379	2720
public-voluntary service, new alignments (address)—	Socialist Party of Italy, trade union policy—
1659	2591
public welfare—	Societies, professional, of construction and building materials industries, list—
career opportunities, summer work experience for college students—	148
9885-86	Society:
conditions and programs, reference facts—	expedience and goal in social development, USSR study—
8789	10781
information programs, report of meeting, June 11-12, 1964—	Great Society (remarks, addressees, etc.)—
16923	17162, 19355, 20718
programs and possibilities (address)—	morals and society, Italian lectures, translation—
9889	21476
research and statistics—	USSR, development of feelings and conscience—
20882	5357
role in war on poverty—	Socioeconomic characteristics of population, 1960—
19028	15315
research relating to children, studies in progress—	Sociologists, employment outlook—
17120	9409
school dropout programs in public welfare, 1963, report—	Sociology:
1660	Communist China, translations—
10472	899,
social welfare in country development (address)—	912, 981, 989, 1046, 1100, 1113,
19029	1138, 1189, 1223, 1281, 1297,
social welfare programs, future role and function in free society, 5th Inter-Faith Consultation, minutes—	1307, 1320, 1342, 2573, 2614,
6830	2709, 2739, 2759, 2793, 2885,
social welfare programs in United States—	2931, 4897, 4930, 4997, 5066,
20801	5117, 5191, 5242, 5280, 5303,
United States experience in meeting needs of children, etc.—	5330, 6907, 6934, 6990, 7007,
7856	7068, 7096, 7129, 7299, 7311,
urban development, social aspects, seminar—	9056, 9147, 9284, 9311, 10797,
7855	10827, 10946, 11046, 11181,
voluntary welfare agencies, fund-raising within Federal service, manual—	12666, 12751, 12849, 12873,
3705	12886, 12976, 14413, 14529,
welfare efforts with modern theories of communication—	14557, 14655, 16001, 16065,
4360	16125, 16138, 16166, 16193,
welfare, etc., indicators—	16224, 16258, 16292, 16305,
3570	16325, 16469, 16475, 16495,
welfare expenditures under public programs, preliminary estimates, 1963-64—	16508, 16517, 16554, 18203,
16862	18225, 18300, 18365, 18394,
welfare, our common cause (address)—	18446, 18529, 18593, 18603,
1661	19848, 19886, 20046, 20137,
Social workers:	20160, 20187, 20314, 20399,
American social workers abroad—	21527, 21549, 21609,
11710	cybernetics, problems, USSR study—
employment outlook—	development research digest—
9410	14396
examination announcement—	Eastern Europe, translations—
8163	925,
protective casework for abused children—	1135, 1274, 2675, 2901, 5189,
4363	5312, 5358, 6931, 6950, 6975,
public assistance adviser, etc., examination announcement—	6999, 7143, 7274, 7288, 8867,
4379	8871, 8951, 8969, 9043, 9185,
Socialism:	9248, 9299, 10808, 10860, 10892,
African, Nasser, Ben Bella and the fine distinction—	10926, 11026, 11036, 11091,
2729	11152, 11204, 11232, 12638,
changes in Socialist countries in 1963—	12667, 12722, 12743, 12765,
5396	12786, 12989, 13022, 14490,
economic-political ideas of European social democrats, 1964—	14527, 14598, 16011, 16053,
7250	16196, 16216, 16246, 16374,
expedience and goal in social development, USSR study—	16388, 18217, 18378, 18461,
10781	18499, 18566, 18605, 19862,
German Democratic Republic in system of international socialist division of labor—	19925, 19978, 20020, 20083,
16438	20213, 20238, 20308, 20397,
growing cooperation raises benefit of international socialist division of labor—	20402, 21418, 21456, 21565,
2569	21571, 21580, 21618,
Italian Socialist interviews leaders of French Left—	human health and laws, USSR study—
12970	18318
Italian Socialists present their economic policy—	international meetings, world list—
1062	4168
Japanese socialists congress, translations—	Marxism and concrete sociological research, USSR study—
8988	2747
permanent commissions of people's councils, activity of study and control carried out—	North Korea, translations—
16404	942,
price and value in socialist economy, USSR study—	1141, 1301, 1471, 2547, 2645,
16024	2671, 2680, 2695, 5054, 7145,
	8949, 9049, 9150, 9227, 11153,
	12975, 15997, 16455, 18401,
	18598, 20261,
	North Vietnam, translations—
	1170,
	1201, 1293, 2537, 2628, 5211,
	5253, 5273, 5287, 5341, 5412,
	7034, 7110, 7315, 7349, 8889,
	8977, 9317, 10820, 10955, 11058,

Entry	Entry
	<b>Sociology—Continued</b>
	North Vietnam, translations—Con.
21508	11164, 11170, 11191, 11197, 11239, 12596, 12684, 12747, 12850, 12949, 12995, 14558, 14492, 14536, 14578, 14587, 16117, 16137, 16159, 16165, 16174, 16197, 16226, 16263, 16285, 16303, 16349, 16457, 16479, 16566, 18262, 18274, 18390, 18404, 18473, 18513, 18590, 19843, 19861, 19935, 20000, 20006, 20102, 20339, 21420, 21468, 21533.
148	philosophical problems, USSR
10781	study
20718	programming social research, USSR
21476	study
5357	research, mathematical simulation, USSR
15315	research needed on motivation, missing link to progress (ad- dress)
9409	see also Microsociology.
899, 1113, 1297, 2614, 2885, 5066, 5303, 7007, 7311, 10797, 11181, 12873, 14529, 16065, 16193, 16305, 16495, 18203, 18394, 18603, 20137, 20399,	Sockets, faulty connections, con- tinuity tester for screening---
5128 14396 925, 5189, 6975, 8867, 9185, 10892, 11091, 12638, 12765, 14490, 16053, 16374, 18461, 19862, 20083, 20397, 21565,	Sockeye salmon, see Salmon. Sokol, Peter M.: nonequilibrium expansion of plasma from thermionic source----- transport equations for ionized gas in electric field----- Sod, Bermudagrass varieties for gen- eral-purpose turf, evaluation----- Sodium: and sodium compounds, minerals yearbook chapter----- high temperature properties----- liquid, fused fluoride coatings as solid lubricants----- mass transfer----- corrosion sample data, screening test data and analysis----- test loop design----- reduction of thorium tetrachloride for preparation of thorium----- vapor expansion characteristics de- termination with inert gas injection pressure-measuring technique----- Sodium aluminate, solubility charac- teristics----- Sodium bisulfite, see Sodium metabi- sulfite. Sodium bromide, thermodynamic properties at low tempera- tures----- Sodium chloride, see Salt. Sodium gallate, mutagenic and anti- mutagenic action, USSR study----- Sodium iodide, thermodynamic prop- erties at low temperatures----- Sodium metabisulfite, preservation of Caspian sprat for feed meal production, USSR study----- Sodium ortho-phenylphenate, concen- tration used to control sweet- potato decay----- Sodium pyrosulfite, see Sodium metabi- sulfite. Sodium-reactor experiment, see Reac- tors (atomic). Sodium sulfate, sulfate cycle for car- bon dioxide removal and oxy- gen generation----- Soft drinks, bottled and canned, in- dustry, review of 1963, outlook for 1964----- Softwoods: lumber standards, impact on small business, hearings----- plywood, current industrial re- ports----- western, log diagraming guide-----

Entry	Entry
	<b>Sohl, Norman F.:</b>
	gastropods from Coffee Sand (Up- per Cretaceous) of Missis- sippi-----
18126	neogastropoda, ophiosthorachia, and basommatophora from Ripley, Owl Creek, and Prairie Bluff formations-----
18125	Soil conservation: abstracts of material published----- 7890, 9916, 15197, 20898. Boy Scouts, soil and water conser- vation activities for----- districts, status of organization, by States, approximate acreage, etc-----
1679, 16964	highlights, 1963----- list of publications----- reserve program and land use ad- justment program, statistical summary, 1963----- signs of change (address)----- soil conservation (periodical)----- soil conservation and domestic al- lotment act, amend----- law----- reports----- tax treatment, amend act, report----- teaching, classroom and field guide-----
17393, 17769, 19379, 9960	Soil Conservation Service: appropriations, 1965, Agriculture Dept., hearings----- conservation information, CI series----- elementary principles in manage- ment, correspondence study course----- engineers in SCS----- national engineering handbook----- report, 1963, digest----- what it does-----
10286 1591 16864 5840 11612 5692 1591	Soil erosion, pine plantations in northern Mississippi, early yield----- Soil mechanics: foundations and earth structures, Navy design manual, change----- plastic limit, operator variance in determination----- shear stress measurements in situ of soils subjected to vibratory loads----- vehicle mobility research proper- ties, measuring-----
2385 3197 8508 8513 19664	Soil moisture, see Soils. Soil temperature, see Soils. Soils: airfield moisture content investi- gation----- Cecl, cropping system studies, Watkinsville, Ga., 1943-62----- coarse and fine grained, traffic- ability tests with Marsh screw amphibian----- compaction investigation----- determination of cerium-144----- distribution of ammonia in soil, its effect on plant growth----- dynamics research, Waterways Ex- periment Station capabilities----- earthworms in relation to produc- tivity----- effect of radioactive fallout, USSR study----- establishing vegetation on exposed subsoil in southern Iowa and northern Missouri----- evaluation and use of soil surveys for engineering purposes in urban development----- far north, bacterial self-decontam- ination, USSR study----- fine-grained----- field test studies on use of aerial cone penetrometer techniques-----



# INDEX 1964

Entry	Entry
<b>Soils—Continued</b>	<b>Soils—Continued</b>
fine-grained—continued	soil survey reports—continued
strength-moisture-density relations	Washington County, Nebr.-----
in vehicle mobility research-----	Williamson County, Tenn.-----
6599	Woodward County, Okla.-----
fumigant diffusion, theoretical aspects-----	Yoakum County, Tex.-----
15	soil surveys-----
geochemistry, Yellow Cat area, Utah-----	urban areas, authorization, report-----
21351	use for engineering purposes in urban development-----
Hawaii, moisture constants and physical properties-----	2319
humus and sandy loam, root development of yellow birch-----	southeastern U.S., toxic factors and acidity as related to lime response to alfalfa-----
780	5857
irrigation, soil-plant-water relationship-----	southern Great Plains, morphological, physical, chemical, and mineralogical properties-----
11612	1680
know your soil, importance of soil surveys-----	stabilization for military purposes, Waterways Experiment Station capabilities-----
21	638
light sandy loam, use of compound and simple fertilizers, comparative evaluation, USSR study-----	stabilization requirements for military roads and airfields in theater of operations-----
16487	2299
liming, aid to better farming-----	structure, affects yellow poplar growth-----
19069	8671
moisture-----	temperature-----
measurement and radial increment in 2 density levels of red pine-----	Big Delta, Alaska-----
777	Galena, Alaska-----
measurements for Montana, including Alberta, Saskatchewan, British Columbia, Idaho and Wyoming, 1922-64-----	McGrath, Alaska-----
18950	17938
measurements for Western United States, including Columbia River drainage in Canada, 1962-63 season-----	Togo, status studies-----
15089	17158
trends in thinned red pine stands in northern Minnesota-----	trafficability-----
776	and mobility research, Army reports, list-----
moisture meters-----	12353
neutron-moderation, application-----	forecasting, freezing and thawing-----
19231	14211
neutron-scattering, field correlation-----	Waterways Experiment Station research capability-----
18064	635
publications, price list, surveys, erosion, conservation-----	use as foundations and construction materials for hydraulic structures-----
16826	5672
radioactivity of, natural-----	vibratory compaction tests, hydraulic backfills-----
9186	14759, 18680
salinity, diagnosing-----	zinc, copper, cobalt and molybdenum content, European part of USSR-----
1697	18343
sandy, in Central U.S., management-----	see also Loess.
27	Sokaski, Michael, Baum jig performance in treating Rocky Mountain coals-----
soil and geography, USSR studies-----	2992
soil loss from soil-block lysimeters planted to small trees, etc-----	Sokol, commemorative stamp, unveiling ceremony (remarks)-----
6751	21835
soil survey reports-----	Solar:-----
Adair County, Ky-----	NOTE.—For other subjects beginning Solar, see Sun.
13459	Solar-angle sensor has no moving parts-----
Aroostook County, Maine-----	13172
13457, 20807	Solar batteries:-----
Caroline County, Md-----	gallium arsenide photovoltaic device, new method used to fabricate-----
15091	14819
Cochran County, Tex-----	radiation damage studies to cells-----
15092	7513
Cotton County, Okla-----	Solar energy:-----
5696	concentrator, 60-inch stretch-formed aluminum-----
Davless County, Mo-----	13144
16865	direct energy conversion, thermal energy storage, heat-transfer analysis-----
Dewey County, Okla-----	9569
7746	rotary, deployable space power supply-----
eastern Stanislaus area, Calif-----	21734
21878	split-rib umbrella-type paraboloidal concentrator, calorimetric efficiency-----
Ellis County, Tex-----	7499
1593	Sunflower solar collector-----
Fayette County, Tenn-----	13143
16867	Tunisia enters era-----
Fulton County, Ky-----	5079
20809	Solar flares:-----
Gage County, Nebr-----	AAS-NASA symposium on physics of-----
16866	20537
Hart County, Ga-----	correlation with ionospheric perturbations and geomagnetic storms, observed by probing-----
3140	16995
Holbrook-Show low area, Ariz-----	effects observed on long VLF paths during 1961-----
13456	9637
Hooker County, Nebr-----	Solar heating, see Heating.
7747	Solar power, see Solar energy.
Iredell County, N.C-----	
18954	
Jackson County, Miss-----	
15093	
Kearny County, Kans-----	
7745	
Lehigh County, Pa-----	
3138	
Logan County, Kans-----	
20805	
Minnehaha County, N. Dak-----	
18953	
Monteau County, Mo-----	
18952	
Morton County, Kans-----	
5694	
Panola County, Miss-----	
5695	
Penobscot County, Maine-----	
7744	
Peplin County, Wis-----	
11613	
Putnam County, Tenn-----	
3139	
Sargent County, N. Dak-----	
7743	
Spalding County, Ga-----	
21879	
Tillamook area, Oreg-----	
20803	
Treutlen County, Ga-----	
13458	
Wabash County, Ill-----	
9776	
Walla Walla County, Wash-----	
9775	

Entry	Entry	Entry
Solar radiation:		Solidification and separation of ice
long wave and reflected, from at-		from saline water----- 10677
mosphere and water surface,		Solids:
methods to compute data----- 8763		polycrystalline, influence of grain
mean daily, monthly and annual,		boundaries on high tempera-
sheet of National atlas of		ture strength----- 1527
United States----- 21921		reductants, experimental conver-
solar flux measurements, July 20,		sion of hematite to magnetite
1963----- 4231		reflection and transmission coeff-
variation, effect of cosmic factors		icients at interface ice-solid----- 14202
on blood system, USSR study----- 1118		thermal radiation properties, mea-
Solar wind:		urement, symposium----- 1450
effect of uniform external pressure,		visco-elastic, dynamic properties,
etc., on terminal shape of geo-		determining by employing
magnetic field----- 13254		forced vibration----- 8510
steady, boundary and distortion of		Solomon, David, accidents on main
geomagnetic field----- 13253		rural highways, related to
steady, effect of ring current on		speed, driver, and vehicle----- 20774
boundary of geomagnetic field----- 13252		Solomon Islands, western groups,
Solder and soldering:		sailing directions----- 21812
aluminum, fluxes and their use,		Solon, Jerry A., hospital outpatient
literature research----- 8070		services, guide to surveying
brazing-----		clinic procedures----- 9718
critique of literature, USSR		Solubility, characteristics of sodium
study----- 18339		aluminate----- 18688
gas-flame metals, USSR study----- 10965		Solutions:
metals, research presented at		alumina hydrate and dilute fluo-
colloquium at 16th congress in		ride, used in preparation of
Helsinki, 1963----- 18257		aluminum fluoride----- 20500
nickel base alloys, effect of 2		leach, copper powder preparation
brazing coatings, etc., on 1200°F		after precipitation with iron----- 16637
stress-rupture strength of L-		Solvents, effects induced on infrared
605, A-286, and Inconel sheet----- 1454		spectra----- 5587
SAP-2 sintered aluminum pow-		see also Extraction (chemistry).
der, USSR study----- 10975		Somali Republic:
titanium alloys, problems----- 1350		investment guaranties, agreement----- 7797
USSR study----- 1287		technical cooperation agreement----- 7793
with high temperature solders,		Somerlock, Charles R., transistorized
USSR study----- 1181		VHF transmitter design for
circuit reliability boosted by solder-		spacecraft applications----- 13215
ing pins of disconnect plugs to		Somes, H. A., tip-moth control fails
socket----- 9563		to improve height of loblolly
hand soldering of electrical connec-		pinus----- 8652
tions, quality requirements----- 21740		Sonar:
hot-air soldering technique pre-		introduction, Navy training course,
vents overheating of electrical		operators trainers, simulation re-
components----- 7490		quirements----- 16798
Soldering flux, see Flux.		Sonic boom:
Soldiers:		aircraft in maneuvers----- 16691
career, Army pamphlet----- 17042		boom propagated from supersonic
civil relief act, text----- 21215		aircraft, effects of flight path
use of credit, helpful or destructive?		and atmospheric variations----- 7562
Army pamphlet----- 11842		ground patterns from maneuvering
Soldiers' Home, District of Colum-		aircraft, application of acoustic
bia:		theory to prediction----- 20580
appropriations, 1964, deficiency,		lateral-spread ground-pressure mea-
hearings----- 10285		surements from airplanes at al-
appropriations, 1965-----		titudes to 75,000 ft. and Mach
hearings----- 8361, 17864		numbers to 2.0----- 1461
law----- 19413		pressures, ground measurements for
reports----- 8343, 17623, 17778		altitude range of 10,000 to
Solenoids:		75,000 feet----- 14903
finite-length, axial and radial mag-		Soo Line RR., emergency board re-
netic fields----- 7559		port----- 2290
force-free, potential advantages of		Sook Hee Kim, see Kim Sook Hee.
anisotropic superconductors----- 21757		Soon, Lim Sam, see Lim Sam Soon.
helically wound superconducting,		Soos, Anna, relief----- 12199
anisotropic effects----- 3031		Sorensen, Roy T., flotation treatment
permits remote control of stop		of iron ore tailing from Cham-
watch and assures restarting----- 13161		plion mine, Marquette Range,
thick, finite-length, helical, axi-		Mich----- 20508
muthal magnetic field----- 14895		Sorghum:
superposition calculation of		chinch bug control----- 19083
fields from semi-infinite sole-		grain-----
noid tables----- 20616		composition of commercial
Solid state diffusion in metals and		grades----- 13570
alloys----- 11854		culture and utilization----- 9936
Solid state image intensifiers----- 7647		hybrids-----
Solid state satellite separation se-		improving vigor in 1st genera-
quence timer----- 16685		selection, USSR study----- 12834
Soliday, S. M., simulator investigation		storage studies----- 15224
of pilot performance during		storage studies----- 15224
extended periods of low-alti-		Sorting, see Rank order.
tude, high-speed flight----- 14776		

# INDEX 1964

	Entry		Entry
Sorting devices, electric sorting machines for tart cherries, performance studies, 1963-----	19053	South (U.S.)—Continued	
Sound:		facts, figures, and comments about collective bargaining (address)-----	7594
acoustic pressure distribution between spherical transducer and baffle, formulas-----	18859	forest types-----	2357
application of acoustic theory to prediction of sonic-boom ground patterns from maneuvering aircraft-----	20580	fresh fruit and vegetable unloads in southern cities by commodities, States, etc-----	7882
atmospheric acoustics as factor in Saturn static testing-----	18735	mid-South, growing loblolly and shortleaf pine-----	19067
auditory fatigue, pure tone, central factor-----	4317	pulpwood price trends in midsouth, 1937-63-----	18078
displacement of deformable body in acoustic medium, USSR study, effects and nucleic elements on cells, USSR study-----	2712	rural nonfarm areas, consumer expenditures and income, 1961-----	18627
hydroacoustical means of surveillance, prospects for increasing range, USSR study-----	5204	small cities in southern region, consumer expenditures and income, 1961-----	11270
hydroacoustical station Paltus, designed for detecting schools of fish, USSR-----	12592	urban places, consumer expenditures and income, 1960-61-----	13045
identification, computer-aided learning, experiments-----	15003	South Africa, foreign trade regulations-----	18187
influence of acoustical vibrations on convective heat transfer to liquids-----	8801	South America:	
infrasonic waves from auroral zone, magneto-acoustic information storage system, research-----	13216	catfishes of callichthyid genus <i>Corydoras</i> , new species and descriptions-----	20658
microacoustic system analysis by measurement of free-field sound speed-----	18866	characid fishes of subfamilies Lebiasininae and Erythrininae, subtribe Nannostomina, osteology, etc-----	20659
sound-scattering layers, USSR study-----	10894	east coast-----	
thrust boosters, acoustic efficiency trends-----	14841	lights and fog signals, lists-----	1523
transmission in helium and various gases at low pressures-----	19180	tide tables, 1965-----	13310
ultrasonics-----		sailing directions, changes-----	11960
alteration of <i>Salmonella</i> and <i>Shigella</i> , USSR articles-----	10845	west coast-----	16774
high purity electroforming method-----	7480	lights and fog signals list, changes-----	3074
irradiation, metachromatic reaction of nucleic acids, USSR study-----	10973	tide tables, 1965-----	13311
irradiation of rabbits, morphological changes in internal organs and skin, USSR study-----	1030	wheat, sedimentation value changes during storage-----	6
mechanism of action on processes of resorption in gastro-intestinal tract, USSR study-----	16278	South Arabia, Federation of, economy, basic data-----	18169
medical devices, USSR studies-----	16211	South Asia, <i>see</i> Asia.	
methods in study of fatigue and deformation in single crystals-----	4223	South Atlantic slope basins, <i>see</i> Atlantic States.	
physicochemical and biological action, USSR, translations-----	5154	South Atlantic States, <i>see</i> Atlantic States.	
propagation of ultrasonic waves in blood, problem of rate, USSR study-----	1029	South Bend, Ind.:	
ultrasound apparatus for removal of dental calculus, USSR study-----	1252	occupational wage survey-----	14694
vibrations in molecular biophysics, USSR study-----	16329	prevent becoming depressed area (remarks)-----	5931
<i>see also</i> Noise.		Studebaker plant closing, report-----	13656
Sound, The, <i>see</i> Oresund.		South Carolina:	
Soundproofing, marine, problems, USSR studies-----	12775	annual survey of manufactures, 1962, statistics for States, standard metropolitan statistical areas, and large industrial counties-----	6029
South, Jerry C., Jr., integral relations application to supersonic non-equilibrium flow past wedges and cones-----	18794	area measurement report-----	17074
South (U.S.):		climatological data-----	3329
America's challenges and hope for future (address)-----	10125	electric rate book-----	15896
caterpillar control on cabbage, etc-----	9939	fishery products, wholesale dealers, lists-----	714
civil rights, public schools, 1963-----	10098	labor organizations, reporting, register-----	16571
employee earnings in selected metropolitan areas-----	16608	landings, fish and shellfish-----	4042
		minerals industry, minerals yearbook chapter-----	21706
		municipal waste facilities, 1962 inventory-----	3104
		municipal water facilities-----	18909
		pecan production, economic aspects-----	17900
		precipitation data, hourly-----	3578
		salt-water encroachment, geology and ground-water resources of Savannah area-----	4808
		women workers, 1960-----	9899
		South Central States, <i>see</i> Central States.	
		South Dakota:	
		annual survey of manufactures, 1962, standard metropolitan statistical areas, and large industrial counties, statistics-----	6028

# JANUARY-DECEMBER

		Entry			Entry
	South Dakota—Continued			Southern Utilization Research and Development Division, publications and patents, semiannual lists	5800, 19061
	climatological data	3329		Southwest (U.S.):	
7594	electric rate book	17983		American-Egyptian cotton, roller ginning	4194
2357	labor organizations, reporting, register	16573		cotton gins, increasing efficiency of power used for materials handling	12312
	minerals industry, minerals year-book chapter	1423		drought, 1942-56 (series)	807-808, 4787
7882	Mississippi River and tributaries, fishery products, wholesale dealers, list	15928, 18028		floods, factors affecting occurrence	12515
19067	municipal waste facilities, 1962 inventory	3106		principal electric facilities, map	677
18078	municipal water facilities	18911		regional water laboratory, name	
18627	precipitation data, hourly	3578		Robert S. Kerr Water Research Center reports	6327, 12213
	western, forest area and timber volume	14320		rock mulch and scalping of ponderosa pine, effects on survival	781
11270	South Pacific Commission: contribution of U.S., remove celling—			water, future	18120
13045	law	6174		water plan	9745-47
18187	report	2217		fact sheet	7719
	South Platte River basin, groundwater resources, western Adams and southwestern Weld Counties, Colo.	12519		hearings	14142
20658	South Pole, traverse, magnetic results, 1962-63	17148		Southwestern Conference on Industrial Modernization, proceedings, Jan. 17, 1964	13744
	South Pole Magnetic Observatory, magnetograms and hourly values	1849		Southwestern Power Administration: appropriations, 1965—	
20659	South Windsor, Conn., clay, Clark Brick Co. deposit, examining and testing for lightweight aggregate use	18668		hearings	12119
1523,	Southbridge, Mass., consumer expenditures and income 1961	11269		reports	12098, 15767
20674,	Southeast (U.S.):			Southwestern States, see Southwest (U.S.).	
11960	acid soils toxic factors as related to lime response to alfalfa	5857		Sovereignty:	
16774	labor organizations, reporting, register	16571		international law of sovereign immunity, policy research study	11625
	ownership of rural land	4611		State, and fiscal policy (address)—	15905
18845	principal electric facilities, map	679		Sovie, Ronald J., volume ion production in tenuous helium plasma	13241
6109	radiation measurements, environmental, 1962-63	21012		Soviet bloc:	
	river basins, yield of sedimentary aquifers	6820		conferences	1182,
18169	titanium	16624		7258, 11173, 14595, 16534,	20035
	Southeast Asia, see Asia.			agricultural sciences	12964
14694	Southeast River Basins, United States Study Commission, see United States Study Commission, Southeast River Basins.			JPRS serial publication notice	1354
5931	Southeastern Carriers' Conference Committee, emergency board report	10478		Government guarantees of credit to Communist countries, prohibit, report	485
13656	Southeastern Forest Experiment Station, research, 1963	14305		guaranty of obligations by Export-Import Bank, etc., prohibit, hearings	524
	Southeastern Power Administration: appropriations, 1965—			medical activities, recent developments	4910
6029	hearings	12119		policy towards underdeveloped countries, list of publications	9783
17074	reports	12098, 15767		recent developments—	
15896	monthly report	3743		hearings	8381
18015	report, 1964	20810		report	12067
16571	Southeastern Radiological Health Laboratory, functions, services, etc	7702		teaching machines and programmed learning, literature survey, 1962-63	7056
12417	Southeastern States, see Southeast (U.S.)			visits of Hungarian scientists, report	20163
21706	Southern Forest Experiment Station: publications, list	3962		Soviet Union, see Union of Soviet Socialist Republics.	
3104	report, 1963	14303		Sovkhozes, see State farms.	
18909	Southern Hemisphere, see Hemisphere, Southern.			Sovnarkhoz carries out preventive inspection, USSR	10747
17900	Southern Pacific Co., accidents	4879,		Soybean meal:	
3578	6866-67, 6871,	18191		futures trading and open contracts	3549-50
	Southern pine, see Pine.			U.S. market, Western Europe	766
4808	Southern Railway, accident	12570		Soybean oil, futures trading and open contracts	3546, 3550
9899	Southern Rhodesia:			Soybeans:	
	double taxation convention	7788		futures—	
	Northern Rhodesia boundary, study	9800		commitments of traders	3344
	tobacco production and marketing	14291		trading and open contracts	3550
6028	Southern States, see South (U.S.).			harvested for beans, acreage, yield, production, 1962-63	16586
				oil content, rapid determination	43
				U.S. market, Western Europe	766
				SP series, see FMC SP series—MA SP series—NASA SP series.	
				Space, topological, metricization	7566
				see also Astronautics—Outer space.	



# INDEX 1964

Entry	Entry
Space Administration, see National Aeronautics and Space Administration.	Spacecraft—Continued
Space age:	axisymmetric launch vehicles, 1455
communications, regulation (address) 15888	ground-wind loads 1455
meaning, comments by authorities, USSR study 5376	blunt nonlifting vehicles entering earth's atmosphere, aerodynamic and rocket braking at very high speeds 11392
teaching to meet challenges, aerospace education handbook for elementary teachers 7569	booms for placing scientific experiments up to 25 ft. from 5505
technology utilization program of NASA for industrial and consumer benefit 1488	booster, manned guidance and control 14789
Space and Air Museum, see National Air and Space Museum.	cabins—
Space and facilities for art instruction 4645	atmosphere, effects of prolonged exposure to oxygen at total pressure of 190 mm. Hg 71
Space batteries, technology handbook 9540	atmospheres, fire and blast hazards 11358
Space biology:	atmospheres, oxygen toxicity 20536
and medicine, USSR studies 12000, 18534	environments, effects or resistance of mice to infection with Klebsiella pneumoniae 11807
bibliography 16668, 18728, 20539, 21744	capsule type vehicle direct and skip entries, guidance with terminal control techniques at parabolic velocity 7503
environmental conditions, biological aspects, bibliography 1799	electrical connections, technology handbook 7478
problem, USSR study 3039, 14628	electrostatic thrusters for propulsion 11381
Space charges, one-dimensional ambipolar currents, effect of initial velocity 16720	electrothermal engine propellant storage and feed system study 13148
Space Corporation, aircraft engine test stands modification, overestimated costs under fixed-price contracts with Air Force Department, GAO report 4768	elektron space system, USSR study, environmental test data, integrated system for collecting and analyzing 14863
Space flight, see Astronautics.	Explorer XVII, real time PCM telemetry data processing and display test stand 13239
Space law, law of space, part of 3d National conference on peaceful uses of space, proceedings 13157	Federal item identification guides for supply cataloging 12297
Space medicine, see Medicine.	supplements 3478
Space perception:	fluid oscillations in propellant containers, influence on stability 7560
double resection in space, USSR study 16458	Gemini, dynamic-model investigation in Langley spin tunnel 11387
spatial perception and concepts, problems 14910	heat-rejection and weight characteristics of—
visual perception of spatial extent 5996	fin-tube space radiators with tapered fins 7535
Space photography, see Photography.	radiator fin-tube configurations 14898
Space Research Committee, Goddard Space Flight Center contributions to meeting, June 1963 14854	identification of pipe, hose, and tube lines, military standard 21255
Space science, advanced research, key to future 16659	interplanetary missions, high-energy chemical stages performance analysis 5507
Space, Science and Urban Life Conference, proceedings 3004	launch environment profiles 5508
Space simulators, environment, construction problems 7495	lubricating mechanical components, adaptation of MoS <sub>2</sub> in situ process 13229
Space stations:	lunar missions—
drag cancellation, electric and chemical thrust systems 20578	landings—
extraterrestrial stations, uses, etc., USSR study 5286	configuration having various multiple-leg landing-gear arrangements 7500
manned, spin dynamics 11419	from synchronous orbit, thrust-vector orientation techniques during manual control 14853
Space surveillance system, see Naval space surveillance system.	simple abort scheme 14871
Space Systems Division, technical documentary report 11809	soft, touchdown dynamics analysis 5510, 14842
Space vehicles, see Spacecraft.	minimum crew space habitability, vehicles-geometric constraints on trajectories for recovery 5881
Spacecraft:	maneuvers, guidance equations 18736
aerodynamic heating of conical entry vehicles at speeds in excess of Earth parabolic speed 5526	manned—
aerospace maintenance safety 3216	attitude stabilization by twin gyros and pulse-modulated reaction jets 20574
Apollo type vehicle, pilot's ability to control during atmosphere entry, study 18788	sealed environments, water recycling system 75
atmospheric entry, deployable centrifugally stabilized structures 14782	visual observations of nightglow, manual control of vehicle attitude using on-off reaction control system, simulator studies 1475
attitude control—	
manual systems, parametric and comparative studies 13150	
use of rotating-solid-rocket system 16689	
attitude stabilized vehicles, pilot control or orbital docking visual-simulator study 5513	

# JANUARY-DECEMBER

Entry	Entry
1453	Spacecraft—Continued
	manufacturing occupations, employ-
	ment outlook-----
11392	Mars and Venus orbiting probes,
	electrically propelled, constant
5505	thrust, parametric study-----
14789	masters of space-----
	Mercury-Atlas 9 (MA-9) mission,
	flashing beacon experiment-----
71	meteoroid hazards, self-sealing
11358	structures for control-----
20536	meteoroid puncture hazards, toler-
	ance limits above surface of
	earth-----
11807	micrometeoroid penetration experi-
	ments as single-sampling life-
	test sampling plans-----
	navigation accuracy in earth-moon
	space regions with on-board
	optical measurements-----
	nonlifting, delta-wing recovery de-
	vice, low-subsonic aerodynamic
	characteristics-----
7503	nuclear stages, parametric perform-
7478	ance analysis for interplanetary
	missions-----
11381	orbit-launched nuclear vehicles,
	lunar mission performance
	evaluation-----
13148	out-of-pile thermionic gas cycle
9084	power systems, radiator area
	characteristics-----
14863	performance measurement in flight
	simulation studies-----
13239	pitch motion, variation due to fuel
	sloshing in rectangular tank-----
	publications, list-----
12297	radiation dosimetry, 8th Mercury-
3478	Atlas mission (MA-8)-----
	Ram B vehicle-----
	description and flight perform-
7560	ance-----
11387	longitudinal aerodynamic char-
	acteristics, etc-----
	Ranger IV, steady-state character-
	istics of differential-pressure
	system for evaluating angles of
	attack and sideslip-----
7535	Ranger VII-----
14898	photographs of moon-----
21255	special report-----
	special report to Congress-----
	Ranger Project investigation-----
5507	hearings-----
5508	report-----
	re-entry vehicles-----
13229	bang-bang path controller for
	range control, feasibility study-
	blunt bodies, shock-layer radia-
	tion velocities-----
7500	convective and radiative heating
	of shapes entering Venus and
	Mars at suborbital speeds-----
14853	Doppler tracking method using
14871	simple CW beacon-----
14842	flight-path angle in upper atmos-
7505	phere, approximate solutions-
5581	graphite ablation rates and sur-
18736	face temperatures during re-
	entry, prediction-----
	hot structure for lifting, design,
	tests and analysis-----
	landing characteristics using
	passive landing system for im-
	pact alleviation-----
20574	pyramidal configuration with
	cambered variable-sweep wings
75	and various longitudinal con-
1487	trols, transonic investigation-
	radiation from slotted-cylinder
	antennas in plasma environ-
	ment-----
1473	radio controlled model, free flight
	investigation of deployment of
	parawing recovery device-----

Entry	Entry
	Spacecraft—Continued
	rockets, radio communications,
	USSR study-----
	S-IV all systems vehicle explosion,
	investigation-----
	Scout vehicle during 4th-stage re-
	entry flight, trajectory and
	large-amplitude motions, anal-
	ysis-----
	sealed components, controlled
	contamination to develop steriliza-
	tion procedures-----
	shielding, Monte Carlo calculation
	of nuclear collision density of
	primary galactic protons in
	slab of aluminum-----
	shielding needs, USSR study-----
	simulators, microbiologic studies-
	solar concentrator, 60-inch stretch-
	formed aluminum-----
	solar orientation control system,
	flight investigation-----
	space batteries, technology hand-
	book-----
	structure, application of magne-
	sium-lithium alloys-----
	supersonic longitudinal stability
	characteristics of 2 final stages
	of 4-stage launch vehicle-----
	temperature control by thermo-
	static fins-analysis-----
	tracking stations program, agree-
	ment with Nigeria-----
	tracking system, range and range
	rate, development-----
	trajectories, secondary errors and
	off-design conditions in optimal
	estimation-----
	transistorized VHF transmitter de-
	sign-----
	triaxial balancing techniques with
	respect to multiple axes study-
	twin-gyro attitude control system
	for space vehicles-----
	unmanned, of United States-----
	USAF aerospace vehicles, informa-
	tion handbook-----
	see also Life support systems—Sat-
	ellites.
	Spaces, see Topology.
	Spaceship crews:
	crew performance during real-time
	lunar mission simulation-----
	selection by psychologists, USSR
	study-----
	Spain:
	agriculture, its competitive posi-
	tion-----
	cotton production, trends and pros-
	pects-----
	economy, basic data-----
	educational data-----
	electronic products, market infor-
	mation-----
	establishing business in-----
	foreign trade regulations-----
	maritime matters, use of ports and
	territorial by NS Savannah,
	agreement-----
	tracking stations, agreement-----
	trade in cotton textiles, agreement-
	Spalding County, Ga., soil survey re-
	port-----
	Spaniol, Joseph F., Jr., United States
	courts-----
	Spanish language:
	Foreign Service Institute, basic
	course-----
	labor terms-----
	teachers, opportunities abroad,
	1955-66-----
	translations of U.S. books, bibli-
	ography-----
	Spanish Sahara, see Sahara.

# INDEX 1964

Entry	Entry
Spanish War Veterans, <i>see</i> United Spanish War Veterans.	
Spanworms:	
elm—	
description, control, etc.-----	767
head-capsule measurements-----	2382
larvae aggregation affects color-----	2383
Spare parts, <i>see</i> Repair parts—also <i>see</i> names of spare parts.	
Spare-time education for workers in Communist China-----	15856
Spark ignition, <i>see</i> Ignition.	
Sparks, Loward D., and wife, relief-----	6234, 14036, 17171
Sparrow, E. M., heat transfer from fin-tube radiators-----	3028
Sparrow, Gene W., proportional-type lateral control system capability of providing aerodynamic heading-angle trajectory control during reentry-----	14876
Spartase, mitigation of physical fatigue-----	4314
Spatial perception, <i>see</i> Space perception.	
Spawn:	
pink salmon, success relative to size of spawning bed materials-----	10572
saprolegnia, fungi of fish and fish eggs-----	6716
Speakers' guide, power for peace, Armed Forces Day-----	8467
Speakers handbook, President's Committee on Employment of the Handicapped-----	7371
Speaking engagements, <i>see</i> Addresses, lectures, etc.	
Special market study releases-----	4046
Special reports, Air Force Cambridge Research Laboratories-----	15243, 17016, 19187-189
Special Representative for Trade Negotiations, Office of:	
appropriations, 1964—	
hearings-----	515
law-----	1974
reports-----	511, 2082
appropriations, 1965—	
hearings-----	10288
law-----	17386
reports-----	10245, 21193, 21233
Specialists, working with low-income rural families-----	14237
<i>see also</i> types of specialists, or occupations.	
Specific gravity:	
Arizona Gambel oak-----	14325
oil-yield relationships for black shales of Kentucky's New Albany formation-----	20507
relation to iron content of rocks, Red Mountain formation, Ala.-----	4781
tree, increment core sampling methods for estimating-----	8692
Specifications, <i>see</i> Government supplies—also subjects.	
Spectra:	
absorption—	
atmospheric thermal radiation in 9.6 ozone band region-----	14915
Rydberg series of N <sub>2</sub> -----	17004
bandwidth, effect on color discrimination-----	5468
computed, and line parameters for water vapor bands at 2.7 $\mu$ -----	14937
density of radiation scattered by non-equilibrium plasma, calculation valid for all wavenumbers-----	13697
distribution of outgoing radiation-----	14917
distribution of shortwave radiation-----	14920
electron, of superconducting compounds, special features-----	4902
Spectra—Continued	
electron paramagnetic resonance, of amino acids and proteins under gamma radiation and light, USSR study-----	9237
emission, analysis of atomic materials-----	5932
energy, electrons transmitted through sapphire foils-----	9539
energy loss of 5.8 Mev alpha particles passing through absorber of variable thickness-----	8065
far ultraviolet rocket spectrophotometer airglow measurements-----	14859
gamma-ray, radionuclide analysis by stepwise multiple regression-----	9713
hydrogen, Stark profile measurement of Lyman- $\alpha$ and Lyman- $\beta$ lines-----	5608
hydromagnetic waves in exosphere, infrared-----	7554
absorption spectrum of water in its liquid state-----	14918
analysis of gases produced during molten salt electrolysis of metals-----	14758
solvent-induced effects-----	5587
magnetic resonance on nuclei of F19 fluorophosphates and fluorophosphonates, chemical displacements, USSR study-----	20205
mass, alkylthiophenes-----	13113
power—	
measurement and interpretation for vibration problems-----	20523
measurement of atmospheric turbulence in severe storms and cumulus clouds-----	20596
resonance, scattering at Lyman-alpha by atomic hydrogen cell-----	13221
solar extraterrestrial, temperature of gray body most closely fitting-----	18730
solar XUV, from 310Å to 55Å-----	20965
ultraviolet and visible of insoluble materials, using polyethylene as dispersion medium-----	11342
ultraviolet, upper atmosphere spectroscopy-----	14769
Spectrochemical analysis, <i>see</i> Spectroscopy.	
Spectrochemistry, hafnium, analysis-----	7460
Spectrography:	
optical emission—	
analysis of high-purity columbium-----	11321
analysis of high-purity hafnium-----	7460
reentries of Trillblazer IIb, data-----	14880
X-ray, analysis for trace quantities of tantalum in columbium-----	16034
Spectrometers:	
helium mass, leak detector, use-----	14834
infrared interference, evaluation, test, and calibration-----	14774
infrared interferometric, moiré fringe measuring system-----	4254
mass, universities, duty-free entry-----	8310, 14049, 17230, 17580
time-of-flight mass—	
adapted for studying charge transfer, ion dissociation, and photoionization-----	66
charge transfer studies-----	54
charge transfer studies, and kinetic analysis-----	13645
ion dissociation in drift tube-----	4228, 13637, 19167
ion dissociation processes occurring in drift tube, observation and identification-----	52

# JANUARY-DECEMBER

Entry		Entry		Entry
	Spectrometers—Continued		Spencer, Bernard, Jr.:	
	time-of-flight mass—continued		pyramidal reentry configuration	
	ion dissociation reactions in drift		with cambered variable-sweep	
	tube-----	5873	wings, etc-----	3019
9257	observation of 2.1 charge trans-		supersonic aerodynamic character-	
	fer-----	19172	istics of series of bodies having	
5952	Spectrometry:		variations in fineness ratio,	
	coal, mass spectrometric techniques,		etc-----	18741
9539	advances-----	1437	Spencer, John S., Montana Christmas	
	gamma ray, automatic fuel element		tree exports reach lowest level	
	enrichment differentiator		since survey was begun in	
	(FEED) based on-----	5969	1942-----	21326
8065	research, agreement with Aus-		Spencer, Vivian E., raw materials in	
	tralia-----	20844	United States economy, 1900-	
14889	Spectrophotometers:		61-----	6052
	DK-2 Beckman model, fluorescent		Sperilli, Frances, relief-----	11996
	color specification-----	5593	Sperry Gyroscope Co., B-58 aircraft	
9713	rocket, airglow measurements in far		components, overpricing under	
	ultraviolet-----	14889	purchase orders by Convair,	
	Spectrophotometric determination of		Fort Worth, Tex., Air Force	
5608	ammonia and labile amino com-		Dept., GAO report-----	10611
7554	pounds in fresh and seawater		Spheres:	
	by oxidation to nitrite-----	13347	accelerating in viscous fluid, forces	
	Spectrophotometry, far ultraviolet		on-----	15865
14918	rocket, instrumentation-----	9601	aspheric surfaces, lathe converted	
	Spectroscopy:		for grinding-----	14814
	copper-base spectrochemical stand-		falling, measurements of atmos-	
14758	ards, NBS preparation-----	20638	pheric density, temperature,	
5587	infrared, in Japan, translations	16034	and pressure-----	16998
	method of integral determination		radar-tracked falling, use in meas-	
	of water vapor content in col-		uring upper-air temperature	
	umn of atmosphere-----	14919	and density-----	9533
20205	semiquantitative spectrochemical		rotating, and other axisymmetric	
13113	method for analysis of coal		shapes, boundary layers-----	20614
	ash-----	16645	Spherical hyperbolas, see Hyperbolas.	
	ultraviolet, of upper atmosphere	14769	Spheres, see Sferics.	
20523	white cast iron spectrochemical		Spheroids, oblate, used in ferrimag-	
	NBS standards preparation-----	14935	netic resonance measurements,	
	Spectrum, see Spectra.		demagnetizing factors-----	18809
20596	Speculation:		Spiced and pickled seafoods-----	10566
	cotton futures trade-----	4088	Spices, foreign agriculture circulars.	3520
13221	cotton, wool, cottonseed oil, pota-		Spillways:	
	toes, futures, commitments of		Amistad Dam, Rio Grande, Mexico	
	traders-----	3343	and United States, hydraulic	
18730	futures trading and open con-		model investigation-----	19662
20965	tracts-----	3545	central and southern Florida proj-	
	cotton-----	3546	ect, hydraulic model investi-	
	cotton, wool, wooltops cotton-	3547	gation-----	642
11342	seed oil, soybean oil-----	3548	low-head navigation dam, Arkansas	
	eggs, potatoes, butter-----	3549	River, Ark., hydraulic model	
14769	potatoes, eggs, butter, and rice-	3550	investigation-----	21282
	soybean meal and cottonseed	4089	Oahe Dam, Missouri River, S. Dak.,	
	meal-----	10134	hydraulic model investigation.	19663
7460	wheat, corn, etc-----		Spillsbury, Calvin C., Western Europe,	
	grain futures trade-----		market for U.S. soybeans, etc.	766
	Maine potato futures-----		Spin (aircraft):	
	wheat, corn, oats, rye, soybeans,	3344	recovery, analytical study and de-	
	eggs, commitments of traders.		termination of moments re-	
	see also Commodity exchanges.		quired-----	7541
	Speech:		Spin (atomic):	
11321	child with speech problem-----	21039	resonance, pentavalent chromium	
7460	disorders, summary of progress-----	14952	complexes, investigation, USSR	
14880	during respiration of mixture of		study-----	14622
	helium and oxygen-----	5460	zero elastic scattering with nuclear	
16634	glottal source measurements, log-		optical model, Fortran pro-	
	ical techniques-----	19159	gram for analysis-----	9570
14834	Intelligibility, computation and		Spin dynamics of manned space sta-	
	measurement, USSR study-----	1139	tions-----	11419
14774	Intelligibility of excerpts-----	17003	Spin wave anisotropy in parallel	
4254	signals, role in automation technol-		pumping experiments on YIG.	9970
8310,	ogy, Rumanian observations-----	9104	Spinach, frozen, U.S. standards for	
0, 17580	Speeches, see Addresses, lectures, etc.		grades-----	19050
	Speed, accidents related to speed on		Spinal cord, Clinical Spinal Cord In-	
	main rural highways-----	20774	jury Conference, proceedings,	
	see also Air speed.		1962-----	7829
66	Speed tests, see Airplanes.		Spinecasting, 9½ foot diameter master	
54	Speel, H. C., economic potential of		and mirror-----	21727
	soaps, detergents, and surfac-		Spindler, Evelyn B., improving teen-	
	tants made from fats and oils.	10455	age nutrition-----	5845
13645	Speer, Paul R.:		Spinning, body in regular precession,	
4228,	Cumberland and Tennessee River		magnetometer to determine an-	
37, 19167	basins floods-----	4816	gular motion-----	11411
	floods of south Atlantic slope ba-		Spirit Lake, recreation guide-----	2372
	sins, James River to Savannah			
	River-----	12521		



# INDEX 1964

	Entry		Entry
Spisaz, Ernie W., rocket performance for chemically frozen expansion of hydrogen.....	3029	Sprayers:	
Spitfire (vessel):		aerosol pulsating unit AAP-0.5	1038
time limitations for registration, extend, hearings.....	15596	Mikron, USSR study.....	2688
Spitzig, William A., analysis of bonding mechanism between plasma-sprayed tungsten and stainless steel substrate.....	20593	agricultural sprayers, dusts, etc., use for medical disinfection.....	2688
Split, Yugoslavia, electrostatic accelerator at School of Engineering.....	16370	Sprays and spraying:	
Spodumene, mill tailing, continuous flotation of beryl, from spodumene mill tailing.....	14748	aerial sprays, spectra method for estimating mass median diameter.....	18086
Spollers (aircraft):		bonding mechanism between plasma-sprayed tungsten and stainless steel substrate, analysis.....	20593
spoller-slot-deflector control on 45 sweptback wing-fuselage model aerodynamic characteristics.....	1464	distribution patterns from low level applications with monoplane.....	16933
Spokane, Wash., occupational wage survey.....	18636	hydraulic spray applications of insecticides for control of slash pine cone and seed insects.....	18084
Sponges:		spray distribution patterns from Piper PA-18A airplane flying at 50 feet.....	13566
ecology of Gulf of Mexico commercial sponges and its relation to fishery.....	14283	2,4-D spray drift, cause of boxelder leaf blight.....	18069
energy metabolism level, USSR study.....	1241	vacuum spraying, thickness monitor for thin films obtained.....	5917
Spontaneous ignition, see Ignition.		Spreiter, John R.:	
Spor Mountain:		effect of ring current on boundary of geomagnetic field in steady solar wind.....	13252
acid leaching of beryllium ore.....	1440	pressure of solar wind on terminal shape of geomagnetic field.....	13254
ore, beryllium solvent extraction.....	14751	Spring-mass representation of free-free nonuniform bar in response to longitudinal forces.....	18749
Spores, bacterial, in simulated Martian environment, germination, etc.....	78	Springer, Victor G., revision of carcharhinid shark genera scollodon, loxodon, and rhizoprionodon.....	18821
Sporn, Philip, nuclear power economics, analysis and comments, 1964.....	19434	Springfield, H. W., seeding test with fourwing saltbush in western New Mexico.....	2380
Sport fisheries, see Fish and fisheries.		Springfield, Mass., principal electric facilities, map.....	673
Sport Fisheries and Wildlife Bureau, fish hatchery program, weaknesses in administration, GAO report.....	21346	Springfield Armory, technical report.....	11527
Sporting goods:		Springs (mechanism):	
Federal item identification guides for supply cataloging.....	12296	Belleville, new package permits rate change, etc.....	9548
supplements.....	3477	Spruce, William E.:	
Sports:		basic data on economy of British Honduras.....	14385
and science, USSR study.....	18275	foreign trade regulations of—	
antitrust laws, limit applicability—		Chile.....	10692
hearings.....	10428	Uruguay.....	4853
report.....	15758	Spruce:	
bribery in sporting contests, prohibit schemes—		broom rust, effects.....	8675
law.....	13866	Sitka spruce planted in 1805 at Unalaska Island, history.....	2355
report.....	2079	volume killed by spruce budworm in northern Minnesota, aerial survey.....	12472
estimating past and current attendance at winter sports areas.....	12467	Spruce budworms:	
international activities, Armed Forces participation, increase expenditure ceiling—		damage to spruce and fir in northern Minnesota, aerial survey.....	12472
hearing.....	6496	defoliation in northeastern Minnesota decreases in 1963.....	12457
report.....	328	Spruce Creek, oilfield, lithology and reservoir properties of Big Lime, Keener, Big Injun, Weir, and Berea horizons, Ritchie County, W. Va.....	1444
medicine, electrocardiographic method of examination, USSR study.....	2876	Spurlock, Hughes H., trend and developments in Japan's economy affecting market for U.S. farm products, 1950-62.....	14174
vigorous voluntary program for naval ships and stations, guide.....	16790	Sputtering, oblique angles of ion incidence.....	9595
see also Fish and fisheries.		Squalls, see Storms.	
Sportsman's stake in agricultural conservation.....	5847	Squash:	
Spot welding, see Welding.		growing.....	4200
Spraberry, James A., summary of reservoir sediment deposition surveys made in United States through 1960.....	13593	pickleworm control.....	11766
Sprat, Caspian, preservation with sodium pyrosulfite for feed meal production.....	10802	Squeeze casting of thin-wall parts, USSR.....	12728
Spray guns, modification to eliminate quick hardening problems by mixing resin and accelerator liquids during application.....	9553	Squids, firms canning, list.....	752
		Squirrels, see Ground squirrels.	

# JANUARY-DECEMBER

	Entry	Entry
	Srawley, John E. crack extension force dependence on crack length for single-edge-notch tension specimen. 10707	Stabilization: economic—
1038		assist by disclosure of finance charges, hearings. 6498
2688	SRDS, see Systems Research and Development Service, FAA.	lead and zinc mining industry—hearings. 536
	Sreekanth, Agaram K., relief. 2021, 6137	report. 2195
18086	SSC, see Ship Structure Committee.	wage and salary programs in post-attack emergency. 12331
	SSD, see Space Systems Division.	Staff development, see Administrative management.
	Staatz, Mortimer H.: geology and mineral deposits of Thomas and Dugway ranges, Juab and Tooele Counties, Utah. 14341	Staff reports, Commerce Department. 6123
	geology of Bald Knob Quadrangle, Wash. 18108	Staff training, stroke rehabilitation program, inservice training for care facility personnel in Oregon. 11561
	Stability: boundaries influence on fluid oscillations in containers of space vehicle. 7560	Stafford, Walter H.: high-energy chemical stages for interplanetary missions. 5507
13566	cones, sharp, right circular models, at hypersonic speeds, study. 11410	parametric performance analysis for interplanetary missions utilizing 1st-generation nuclear stages. 21759
18069	crater slopes, Project Sedan. 122	Stages and discharges of Mississippi River and its outlets and tributaries, 1962. 11346
5917	in the large, on nonlinear system of differential equations. 20592	Stagnation point: blunt bodies in axisymmetric flow, laminar compressible boundary layer, general solution. 18784
13252	liquid layer of uniform thickness spread over rigid circular cylinder subjected to lateral accelerations. 18776	heat transfer measurements in arc-heated subsonic stream, theoretical and experimental, comparison. 14840
13254	Orr-Sommerfeld equation for case of plane Poiseuille flow, numerical method. 16717	mass addition in stagnation region for velocity up to 50,000 ft. per second. 18795
18749	parachutes, radially vented. 9612	stock envelopes of blunt bodies at large angles of attack. 3012
	Stability of aircraft: B-52H tests. 1729	Stahl, R. Ward, survey of burning coal-mine refuse banks. 7428
18821	C-130-E, limited category 2 stability and control tests. 13615	Stalman Bros.-Simon Wrecking Co., relief. 17497
2380	C-135B, limited category 2 tests. 13616	Stainback, P. Calvin, heat transfer measurements at Mach number of 8 in vicinity of 90° interior corner aligned with free-stream velocity. 18750
673	derivatives, determination from flight test data by means of high speed repetitive operation. 11786	Stainless steel: AISI 301, tensile coupon tests of cryoformed pressure vessels at cryogenic temperatures. 21763
11527	directional, static, effects of gross changes on V/STOL handling characteristics. 20603	alloys and superalloy, residual static strength at 109° F, 70° F, and 550° F. 5514
9548	dynamic: parawing glider towed air cargo delivery system. 16682	alloys, fatigue-crack propagation. 20587
14385	supersonic transport in cruising flight, pilot evaluation. 18764	AM-530, fatigue behavior. 13139
10692	transport cruising at Mach number 3. 20607	clad, production, USSR study. 11042
4853	four-propeller tilt-wing V/STOL transport. 20590	Explorer XIII skin material, micrometeoroid penetration rate experiment. 1458
8675	HH-43B helicopter—category 2 stability and control tests. 13612	fume hood for safety in use of perchloric acid. 14753
2355	performance evaluation. 1730	heat resistant, electrosag remelting, USSR. 2517
12472	longitudinal stability characteristics of low-aspect-ratio wings having variations in leading-trailing-edge contours. 20577	OKhIONZOT2, large size pipe production from, USSR study. 2812
12472	model of vectored-thrust jet VTOL transport airplane, flight tests, nonlinear longitudinal dynamic stability, study. 20620	penetration by micrometeoroids, Explorer XVI experiment. 18772
1444	static longitudinal, Project Fire reentry stage after reentry-package separation. 5515	PH 15-7 Mo, axial-load fatigue properties. 14887
14174	supersonic lateral-directional characteristics of 45° swept wing-body-tail model with various body cross-sectional shapes. 16693	substrate, coated with plasma-sprayed tungsten, analysis of bonding mechanism. 20593
9595	T-33 test. 1731	tensile properties and hardness, effects of substituting cobalt for nickel. 11333
4200	T-39A limited stability and control tests. 7969	type 304, swaged powder fuel assembly clad, failure. 10031
11766	V/STOL aircraft, effects of propeller slipstream. 21911	type 347, spectral normal and total normal emittance, effects of preoxidation treatments. 16684
12728	YHU-1D category 1 helicopter. 7968	wires, reinforcement for articulated concrete mattresses, galvanic effect. 14214
752	Stability of spacecraft, see Spacecraft.	
	Stability of wheat sedimentation values. 7	

# INDEX 1964

	Entry		Entry
Stains and staining, removing from fabrics, home methods.....	11761	Standards and standardization: cataloging and standardization program, semiannual report.....	10298
Stains and staining (microscopy): acridine orange at different pH values, use in examination of normal and tumoral cells, USSR study.....	7074	commercial standard series.....	3042, 5539-43, 9631, 11430, 16736, 18802.
intra-vitam staining of cells and tissues, USSR study.....	12675	Defense Department—specifications and standards index supplement.....	19614, 3586
Stall (aircraft): control devices on unswept tilt wing model, wind-tunnel tests.....	7530	standardization documents, supply classification listing.....	3496, 19613
stalling and tumbling of radio-controlled parawing airplane model.....	14852	standardization policies, procedures, etc., manual.....	2252, 4049, 15827, 21251
swept wings, characteristics, review.....	14896	directory of standards laboratories in U.S.....	20636
VZ-2 VTOL, wing stall, full-scale wind-tunnel test.....	3014	directory SD series.....	2256, 6552, 12306, 17898
wing stalling in transition, effect on model of VZ-2 aircraft.....	16698	Federal specifications and standards, index.....	6693
Stallings, Robert L., Jr.: heat transfer and pressure measurements on delta wings.....	18740	Federal specifications, standards, and handbooks index, supplements.....	3585
heat transfer measurements on flat plate and attached protuberances in turbulent boundary layer.....	20589	Federal standards.....	687-689, 2329-31, 4722-24, 6690-91, 12407-410, 14260, 19710-712.
Stallman, Robert W., multiphase fluids in porous media.....	4789	Federal test method standards.....	8590, 15907, 17992
Stambler, Howard V.: scientists and engineers, 1960-70, supply and demand.....	2971	Industrial classification system, purpose and principles (address).....	11912
scientists, engineers, and technicians in 1960's requirements and supply.....	7624	military standards.....	562-563, 6547, 8466, 10448-450, 12304, 14164, 15823, 21255
La Stampa (periodical): indexes.....	888, 1017, 1069, 1195, 1290, 1306, 2518, 2577, 2616, 2834, 4942, 4996, 5074, 5100, 5153, 5323, 5394, 6955, 7054, 7148, 7280, 8945, 9019, 9157, 9274, 9348, 10848, 10925, 11012, 11107, 11202, 12630, 12785, 12870, 12992, 14442, 14584, 16020, 16086, 16157, 16229, 16347, 16432, 16549, 18292, 18407, 18520, 18584, 19906, 20054, 20147, 20296, 20388, 21472, 21564.	standardization manual M series.....	2252, 15827, 21250-251
La Stampa sera (periodical): indexes.....	888, 1017, 1068, 1195, 1290, 1306, 2518, 2577, 2616, 2834, 4942, 4996, 5074, 5100, 5153, 5323, 5394, 6955, 7054, 7148, 7280, 8945, 9019, 9157, 9274, 9348, 10848, 10925, 11012, 11107, 11202, 12630, 12785, 12870, 12992, 14442, 14584, 16020, 16086, 16157, 16229, 16347, 16432, 16549, 18292, 18407, 18520, 18584, 19906, 20054, 20147, 20296, 20388, 21472, 21564.	technical standard order TSO (series).....	4684
Stamper, John W.: aluminum.....	20465	United States standard for colors of signal lights.....	18803
titanium.....	18711	see also subjects.	
Stamping, see Metal stamping.		Standards Laboratory, Naval Weapons Bureau, instrument calibration techniques.....	13351-354
Stamps, see Food stamps—Postage stamps.		Standing wave meter, see Standing wave ratio indicator.	
Stanaker Dam, see Steinkaker Dam.		Standing wave ratio indicator, Hewlett-Packard 415C of D meter, instrument calibration procedure, technical manual.....	11523
Stanczyk, Martin H.: continuous attrition grinding of coarse kaolin.....	2094	Standing waves, VSWR modified reflectometer technique.....	13354
electro-dewatering tests of Florida phosphate rock slime.....	13127	Stanfield, K. E., oil yields of sections of Green River oil shale in Utah, 1952-62.....	11326
Standard Airways, Inc., accident.....	11923	Stanford University, accelerator power supply, hearing.....	10148
Standard Lime and Cement Co., mining methods and costs.....	13107	Stanislaus area, Calif., see Eastern Stanislaus area, Calif.	
		Stankiewicz, N., field emission of charging metallic colloids.....	5516
		Stannous fluoride: aqueous solutions, shelf life.....	5911
		inactivation by calcium pyrophosphate.....	5909
		solutions, in vitro effectiveness of topical applications of low concentration.....	13647
		tap-water solutions for enamel surface protection.....	8002
		topically applied in aqueous solution in caries prevention in military population.....	13649
		X-14 solution, prophylaxis pastes evaluation.....	5910
		Stanton, Beryle: farmer cooperatives, farm business tools.....	4196, 3794
		news for farmer cooperatives.....	3794
		Staphylococcus, antibiotic action of penicillin fungi, USSR study.....	16035
		Staple removers, heavy duty, operated by hand.....	9552

# JANUARY-DECEMBER

Entry	Entry
	STAR, <i>see</i> Scientific and technical aerospace reports.
10298	Star Mine stress directions, determining through rock joint analysis, etc.-----
3042,	11320
6736,	
	Star-spangled banner, inspiration for writing of national anthem.-----
19614	7610
3586	Starch, digestion, action potentials of Ranvier nerve fiber nodes and in vivo-in vitro comparison, USSR study.-----
3496,	16501
19813	Stardishes, asteroids of Blue Dolphin expeditions to Labrador.-----
2252,	7599
21251	Stark, I. E., principles of radiochemistry-----
20636	8050
2256,	Stark, Kenneth W., endless-loop tape transport for satellite applications-----
17898	13238
6693	Stark, Martin C., MTMS, stereo input study-----
	7646
3585	Stark profile measurement of Lyman- $\alpha$ and Lyman- $\beta$ of hydrogen.-----
7-689,	5608
0-91,	14404
12,	Starks, La., motor carrier accident.-----
8590,	14275
17992	Starkings:-----
	15653
11912	Starr, Fred E., relief-----
8466,	7510
21255	Stars:-----
15902	AO, atmosphere, departures from local thermodynamic equilibrium-----
2252,	13626
0-251	16816
4684	bolometric corrections, revised scale-----
18803	16077
1-354	ephemeris, 1965.-----
	16077
	gravitational waves and superstars, USSR study-----
11323	9613
13354	massive, evolutionary stages in hydrogen exhaustion phase through onset of carbon burning-----
11326	9668
10148	photographic measure of double stars-----
5516	14995
5911	slight reduction tables for air navigation-----
5909	14845
13647	supernovae, neutrinos, and neutron stars, final evolution-----
8002	18761
13649	9669
5910	transit times, manually recording, measurement of errors-----
4196	3127, 7731
3794	17084
16035	State and local government employment payrolls-----
9552	4050
	State banks:-----
	member banks of Federal reserve system, 1963, list-----
	4719
	supplements-----
	4051
	membership in Federal reserve system, weekly changes-----
	3313
	State boards and departments of education, <i>see</i> Educational boards and departments.
	State Department:-----
	appropriations, 1964-----
	hearings-----
	515
	law-----
	1974
	reports-----
	511, 2082
	appropriations, 1964, supplemental, proposal-----
	10358
	appropriations, 1965-----
	hearings-----
	8363, 15791
	law-----
	17386
	reports-----
	10245, 21193, 21233
	appropriations, 1965, supplemental, proposal-----
	19582
	biographic register-----
	1595
	bulletin-----
	3414
	department and foreign service series-----
	1595,
	7748-49, 9778, 11615, 15095,
	16869, 20811.
	educational and cultural diplomacy, 1962-----
	3145

Entry	Entry
	State Department--Continued
	educational and culture exchange program, American grantees, 1963, list-----
	15096
	foreign assistance appropriations, 1964-----
	hearings-----
	2229
	law-----
	1985
	reports-----
	2069,
	2098-99, 2103, 2220, 12045
	foreign assistance appropriations, 1965-----
	hearings-----
	12117, 19588
	law-----
	21126
	reports-----
	13950, 13952, 19582
	Foreign Buildings Office, construction, Tangier, Morocco, GAO review-----
	10614
	foreign operations appropriations, 1965, hearings-----
	12117
	general information-----
	9778
	interagency directory, key contacts for planning and development of educational, cultural, scientific and technical exchange programs-----
	15098
	International Information and cultural series-----
	3145, 7768
	news letter-----
	3415
	press releases-----
	3925
	publications, list-----
	4028
	Secretary, national security administration study-----
	6509
	Secretary of State, Air Force Academy assembly-----
	45
	security, investigation-----
	hearings-----
	2244
	testimony, letters, etc-----
	541
	security officers, protecting heads of foreign states and other officials, provide authority to arrest without warrant-----
	10327
	hearing-----
	17352
	law-----
	10231, 14108
	reports-----
	5698,
	series S-----
	7772, 9805-6, 13465-466
	Soviet bloc developments, views on, hearings-----
	8381
	travel regulations, violations by U.S. citizens, hearings-----
	416, 2127
	what it is, what it does-----
	16869
	winning cold war, U.S. ideological offensive, hearings-----
	8382
	State farms, structure of production administration and wages in sovkhos, translations on USSR labor-----
	19928
	State finances series-----
	190-191,
	8139, 10073, 21036
	State Governments, Council of, <i>see</i> Council of State Governments.
	Statements, <i>see</i> Addresses, lectures, etc.
	States:-----
	age of majority, laws-----
	9894
	summary by States, 1962-----
	5801
	agricultural conservation program-----
	summary by States, 1962-----
	5801
	summary by States, 1963-----
	19062
	agricultural workers status under State and Federal labor laws-----
	16580
	agriculture departments, directory, 1964-----
	9906
	air pollution control program grants under clean air act-----
	11548
	air pollution laws, digest-----
	5651, 21845
	authority over development of urban water supply and sewerage systems-----
	11578
	brucellosis eradication activities-----
	4066
	child labor laws, summary-----
	11254

Do not order from index; see indicated entry

Page 601



# INDEX 1964

	Entry
States—Continued	
civil defense, Federal contributions available	15342
class specifications for nursing positions, guide for States and local public health agencies	13393
congressional redistricting, proposals, hearings	17657
continuity of government, constitutional amendment to assure, explanation	19646
cooperative State-Federal research in agriculture and forestry	19065
cost standards for basic needs for old-age cases and families receiving aid to dependent children, Jan. 1963	10496
creating opportunities for older persons, selected papers from 4th annual conference of State Executives on Aging	21923
directors of junior colleges and coordinators of State systems of 2-year colleges, conference proceedings	605
discrimination in employment, laws against—	
fair employment practice acts	11259
older workers	11260, 16582
distribution of public employment, 1963	8135
economic areas, outpatient psychiatric clinics, data 1961	13282
education department directors of programs for gifted and talented, conference report	4651
educational records and reports series, handbook 5	21270
employee-retirement systems of State governments, 1963, finances	11909
employment and age certifying offices, directory	9376
employment and earnings statistics, 1939-63	18629
employment certificates, help you, help youth	18612
equal pay laws, digest	13541
equal pay legislation—	
inventory	20885
what you want in bill	20888
exemption of certain employees from withholding taxes, reports	10413, 12225
farm mortgage debt	2265
Federal grants—	
air pollution control—	
law	1935
law, description	4825
reports	382, 465
commercial fisheries research and development act, 1964—	
hearings	10330
Interior Dept. reports on legislation	12149
law	12004
report	10234
Great River Road, interstate planning and coordination, increase—	
law	21152
reports	14091, 19490
Health, Education, and Welfare Dept	10665
HEW, 1962	829
HEW, 1963	18153
higher education facilities act, law	1933
highway construction act of 1964—	
hearings	8396, 12280
law	17282
reports	10211, 12066, 14093

	Entry
States—Continued	
Federal grants—Continued	
highway program, permission to increase mileage, report	14090
highways, disaster road program, amend U.S. Code—	
hearing	15820
law	21150
reports	17720, 19488
juvenile delinquency prevention and control, extend act—	
law	15385
reports	6283, 12087
library services act—	
law	6180
report	2072
local review, report	4542
maternal and child welfare and combating mental retardation, comments	2128
mental health planning grant proposals, 1963 digest	5555
metropolitan planning, effectiveness	17877
national survey	4583
nursing homes for veterans—	
hearings	12278
law	17309
report	15749
water resources planning—	
hearings	12140
reports	494, 17621
Federal-State cooperative programs, retirement credit hearings	15601
flags, reproductions	4429
fresh fruit and vegetable shipments	9907, 11734
government—	
education directory, 1963-64	6562
finances 1963, compendium	10073
finances, 1963, summary	8139
regulation of food and related products, report	358
government agencies, employment of scientific and technical personnel, 1962	14705
health authorities, directory, 1964	13897
health departments, role in medical care	9726
higher education legislation, 1963, survey	4650
hospitals for mental disease, departments dealing with mental health, directory	14948
industrial homework laws, summary	11262
industrial relations legislation—	
mediation laws, summary	11261
union regulatory provisions, summary	16583
interagency planning, mental retardation guidelines	13410
interest bearing U.S. Government securities available for investment of short-term cash balances of local and State governments	1637
interstate carrier water supplies, inventory	7698
junior colleges, directors and coordinators of State systems of 2-year colleges, conference proceedings	19638
labor departments	11265
labor laws for women, general information	13550
labor legislation enacted in 1963	5424
labor used to produce field crops, estimates	9965
land-grant colleges and universities, Extension Service review (periodical)	3450
legislation program of Advisory Commission on Intergovernmental Relations	9905

# JANUARY-DECEMBER

Entry	Entry
	<b>States—Continued</b>
	legislative bodies, temporary stay of reapportionment, report..... 15769
14090	legislatures, apportion one house on factors other than population, amend Constitution of United States to guarantee right, report..... 19460
15820	library functions, 3d assembly, proceedings..... 14720
21150	low-income, family income and related characteristics..... 21926
19488	manufactures, general statistics, 1962, 1961, and 1958..... 156
6180	marriage records, where to write..... 11588, 20773
2072	mental health personnel, directory..... 16742, 20648
4542	mental health planning, 1964, progress reports, digest..... 21791
2128	mentally retarded, laws and regulations affecting, checklist..... 15067
5555	migratory labor committees, directory..... 2948
17877	minimum wage laws—
4583	and orders, analysis of rates and coverage..... 1663
12278	suggested language..... 13037
17309	summary..... 11256, 14673, 16581
15749	minimum wage status..... 13549
12140	natural guardianship and support of minor children, laws governing..... 19037
17621	nomination and election of U.S. Senators, laws, guidebook, print as Senate document, report..... 8431
15601	occupational safety and health bill, suggested language..... 13039-40
4429	outdoor recreation statistics, 1962..... 7667
11734	parks for America, resources survey..... 18831
6562	patient movement data for State and county mental hospitals..... 16746, 21794
10073	placement and foster-care of dependent children, report..... 6215
8139	plane coordinate systems, interpretative statement..... 17150
358	population estimates, 8125, 17105, private employment agencies—
14705	laws, summary..... 11258
18897	regulation, law, suggested language..... 13038
9726	property tax, role in strengthening public assistance plans under social security act, staff development provisions..... 12355
4650	public assistance, simplified methods for determining needs..... 6605
14948	public health legislation, 1962..... 1566
11262	radiation hazards control, laws and regulations..... 14675
11261	recipient rate and average payment in counties, June 1960..... 10498
16583	right of minor, 14 years of age or over, to nominate own guardian, laws governing..... 21928
13410	role in community planning and action for older persons..... 9887
1637	safety codes, comparison with ASA, charts—
7698	excavation..... 2947
19638	fixed ladders..... 5420
11265	portable metal ladders..... 7368
13550	portable wood ladders..... 20430
5424	salary ranges of positions in employment security, etc..... 10667, 19807
9965	school laws and regulations for health, safety, driver, outdoor, and physical education..... 17924
3450	school systems—
9905	preliminary statistics, 1961-62..... 592
	statistics, 1961-62..... 19646
	senior citizens, statistics..... 10072

Entry	Entry
	<b>States—Continued</b>
	services for crippled children..... 11917
	soil conservation districts, status of organization, etc..... 1592, 18951
	State and local governments, Federal aids, catalog..... 10421
	print additional copies, reports..... 15681, 17859, 19480, 21189
	State and regional defense airlift planning..... 17969
	States and AEC, growing partnership (remarks)..... 19266
	supervisors of pupil transportation, directory..... 4647
	supervisors of trade and industrial education, directory..... 4617
	surplus property agencies directors, directory..... 10062
	talent development personnel and activities..... 21273
	tax collections in 1963..... 191
	tax collections in 1964..... 21036
	tax revenue—
	July-Sept. 1963..... 1824
	Oct.-Dec. 1963..... 8138
	Jan.-Mar. 1964..... 13772
	Apr.-June 1964..... 19307
	taxation of interstate commerce, report..... 13928
	print additional copies, report..... 17822
	taxation on interstate commerce activities, investigation—
	expenses, report..... 12070
	extend time for filing reports—
	law..... 8225
	reports..... 6296, 6456
	unemployment insurance laws—
	comparison..... 21276
	significant provisions—
	Nov. 15, 1963..... 4659
	Jan. 1, 1964..... 6584
	urban water policy..... 9728
	vocational education boards, digest of annual reports..... 576
	vocational rehabilitation agency casework, 1962, evaluating..... 13509
	voting, time off, laws..... 14670
	wage laws prevailing, summary..... 11257
	wage payment and collection law—
	suggested language..... 14683
	summary..... 13033
	water rights, Federal-State relationships, clarify, hearings..... 21240
	women, weight lifting provisions..... 3193
	women workers, legislation of interest to..... 7859
	work stoppages, 50 States and District of Columbia, 1927-62..... 2959
	workmen's compensation laws—
	comparison of major provisions with recommended standards..... 7365
	history and coverage benefits, summary..... 11264
	see also Intergovernmental relations—Interstate agreements..... 2009
	Stathis, Nicholas A., relief..... 14857
	Static, whistlers observed by Vanguard III, data report..... 14857
	Static electricity, see Electrostatics.
	Static stability characteristics of blunt low-finesness-ratio bodies of revolution at Mach number of 24.5 in helium..... 11409
	Stationary engineers, employment outlook..... 7390
	Statistical abstract of United States: departmental edition..... 17113
	document edition..... 17445
	supplement, congressional district data book, 88th Congress—
	departmental edition..... 4345
	document edition..... 4430
	Statistical aspects of antisocial behavior of minor in United States..... 13783

# INDEX 1964

	Entry		Entry
Statistical bulletins.....	40-41, 1720-21, 5681, 7946-49	Steamship Trade Association of Balti- more, Inc.-Waterfront Guard Association, pension fund, qualified trust.....	1864, 4522
Statistical determination of actual service life of stock of metal- cutting machine tools, USSR.....	10997	Steamships, <i>see</i> names of steamships, Stearns, Carl A., evaluation of etchants and techniques used to produce dislocation etch pits on sodium chloride.....	13242
Statistical publications, <i>see</i> names of departments, etc., issuing pub- lications.		Stedman, R.I., flavor contribution of Turkish tobacco in blended cigarettes.....	13571
Statistical Reporting Service: appropriations, 1965, Agriculture Dept., hearings.....	10286	Steel: all-Union scientific and technical conference of steelmelters, USSR.....	19896
periodic reports, list.....	4218	alloy, electroslag welding, USSR study.....	21602
reports, checklist.....	3316	austenitic heat resisting steel and alloys used in building gas tur- bines, USSR study.....	14441
Statisticians: career with National Center for Health Statistics.....	7691	ball-bearing, new casting method, USSR study.....	2758
employment outlook.....	9403	brittle fracture— low stress problems.....	5677
Statistics: activities of Federal Government personnel, equipment, costs, report.....	6276	propagation studies.....	1575
methods use in studying finite- difference structure of balance equation, USSR study.....	7043	carbon— bars and shapes from Canada, de- termination of injury.....	18991
miscellaneous studies.....	11440	effect of carbon content on dif- fusion of hydrogen, USSR study.....	11003
statistical series releases, SEC.....	4053	carburizing and heat treatable steels DI-2, etc., USSR study.....	21446
statistical series report, Outdoor Recreation Bureau.....	7667	chemical composition and harden- ability, Federal standard.....	12407
use in lexicography, USSR study.....	8850	chemical heat treatment, theoreti- cal bases, USSR study.....	16199
use of computer technology in sta- tistical work, USSR study.....	10755	columbium as microalloying ele- ment and effect on welding technology.....	1577
<i>see also</i> Vital statistics— <i>also</i> sub- jects.		continuous casting and open-hearth computer controls, USSR studies.....	9291
Statuary, <i>see</i> Sculpture and statuary.		continuous teeming, prospects for development, USSR study.....	4908
Statue of Liberty National Monument, general information.....	11471	ductility exhaustion and brittle fracture caused by prestrain and aging.....	16853
Statue of Liberty National Monument American Museum of Immigra- tion; commemorative medal, liberty series—		electrochemical corrosion in sea water, role of bacteria, USSR study.....	2636
law.....	6173	forging industry, review of 1963, outlook for 1964.....	6005
reports.....	460, 2094	forgings, current industrial re- ports.....	3390
Status of Women, President's Com- mission on, <i>see</i> President's Commission on Status of Women.		foundries, current industrial re- ports.....	3390
Status of world's nations.....	9797	hardenability, USSR study.....	11140
Statutes, <i>see</i> Law.		heat resistant Soviet research.....	5095
Statutes at large: citations, how to find, pamphlet.....	6365	heat-treated 4340— effect of fatigue crack on notch strength and fracture develop- ment in cylindrical specimens.....	5588
88th Cong., 1st sess.....	8579, 12402	specimen size effect on fatigue crack strength of cylindrical specimens.....	13335
Staver, David A., relief.....	322	high - strength, stress - corrosion cracking, etc.....	13342
Staylor, Frank W., afterbody pres- sures on 2-dimensional boat- tailed bodies having turbulent boundary layers.....	14882	industry— employment outlook.....	9447
Steam: low-pressure steam reactor review group, report.....	15289	review of 1963, outlook for 1964.....	6010
superheated, alloys performance.....	10030	iron and steel, mineral industry survey— annual.....	18671
thermodynamic properties and Mol- lier chart for hydrogen from 300° K to 20,000° K.....	11359	monthly.....	3619
use, with oxygen, for gasification of coal.....	7443	iron and steel scrap, monthly— final data.....	3620
Steam boilers, <i>see</i> Boilers.		preliminary data.....	3621
Steam filters, <i>see</i> Pipe filters.		low-alloy, isothermal transforma- tion and hardenability, effect of uranium.....	18697
Steam generators: maritime nuclear, status report on 630A.....	8056	minerals yearbook chapter.....	21693
overpricing for nuclear aircraft car- rier, GAO report.....	6779		
sodium cooled reactor system, chemical and stress analysis.....	5955		
Steam power plants: equipment, Federal item identifica- tion guides for supply catalog- ing.....	12292		
supplements.....	3473		
Steam railways, <i>see</i> Railroads.			
Steamboat Springs, Nev., regional ge- ology of area.....	19788		

# JANUARY-DECEMBER

Entry	Entry	Entry	Entry
	Steel—Continued	Stelluto, George L.:	
	production—	industry wage surveys—	
4, 4522	by electroslag remelting, USSR	eating and drinking places,	
	studies	June 1963	16606
	melting pyrophoric hydrogen-	hospitals, 1963	16611
	reduced iron powder	Stem rust, spread by barberry bushes	
	reactor pressure vessel steels, neu-	to wheat, etc.	9958
13242	tron embrittlement	Stenographers:	
	reinforcing steel, protection from	career opportunities in General	
	corrosion	Services Administration	795
13571	scrap, minerals yearbook chapter	employment outlook	9418
	special steels and alloys, USSR	examination announcements	206, 6102
	study	examinations—	
	structural, open-web joists, and	Federal, what it is and how	
19596	light-gage, for buildings, engi-	given	1845
	neering manual	practice dictation transcript	
21602	sulfur-modified friction and wear in	sheet	6093
	vacuum	sample questions	212
	uranium alloyed, fabrication and	opportunities in Washington, D.C.	11566
	mechanical properties	transcript booklet, dictation test,	
14441	welding and welding equipment,	exhibit	6094
	USSR studies	Stenomidae:	
2758	see also Bessemer process—Stain-	new genus, with description of 4	
5677	less steel—also names of manu-	species	18822
1575	factured articles.	North American, review of family-	20637
	Steel castings, see Castings.	Stenotomus chrysops, see Scup.	
	Steel containers, see Containers.	Stephen T. Mather Interpretive Train-	
	Steel mills:	ing and Research Center, gen-	
18991	inventories of shapes, current in-	eral information	11472
	dustrial reports	Stephens, D. L., dislocation structures	
11003	shapes, inventories, summary 1963	in single-crystal $Al_2O_3$	19173
	and 1962	Stephens, Emily L., establishing	
21446	USSR importance of shop in opera-	business in Hong Kong	8817
	tion	Stephens, James G., geology and ura-	
12407	Steele, L. E., neutron embrittlement	nium deposits at Crooks Gap,	
	of reactor pressure vessel	Fremont County, Wyo.	14337
	steels	Stephens, Joseph R., interstitial im-	
16199	Steers, Carter A., soil survey, Dewey	purities effects on low-tempera-	
	County, Okla.	ture tensile properties of tung-	
	Steers, fed pelleted rations, com-	sten	14851
1577	parison of chromic oxide and	Stepping switch with simple actuator	
	conventional methods in diges-	provides many contacts in	
	tion trials	small space	13163
9291	Steffensen, James P., teachers nego-	STEPS program for improvement of	
	tiate with their school boards	science teaching	4648
4908	Stefferud, Alfred, farmer's world,	Sterilization:	
	yearbook of agriculture, 1964	potential role of sterility method for	
	Stehlik, Charles J., mine roof rock and	insect population control	20897
16853	roof bolt behavior resulting	sealed components of spacecraft,	
	from nearby blasts	controlled contamination ap-	
	Steigelmann, William H., radioisotope	proach	77
2636	shielding design manual	surgical instruments, encapsulation	
	Stein, Bland A., diffusion studies of	process	16671
6005	oxidation resistant coatings on	Stern, David:	
3390	Mo-0.5 Ti molybdenum alloy	interplanetary magnetic field—	
	at 2,500 F.	cosmic ray anisotropy	18746
	Stein, Edward S., factors influencing	magnetic field calculation	18745
3390	design of original-documents	Sternitzke, Herbert S., Alabama for-	
11140	scanners for input to com-	ests	8698
5095	puters	Steroids:	
	Stein, Lester, testimony, hearings	CEMA coordination conference on	
	Stein, Manuel, prebuckling deforma-	research problems, USSR	16129
5588	tions and stresses effect on	in medicine, utilization of anes-	
	buckling of perfect cylinders	thetic properties, USSR study	19890
	Stein, Robert L., unemployment among	Stevens, G. H., fatigue strength of	
13335	full-time and part-time work-	phenolic laminates	12447
	ers	Stevens, Joseph B., relief	17501
13342	Stein, William I., more natural regen-	Stevens, Leonard A., on growing	
	eration by controlling seed-	older	21836
9447	eating rodents	Stevens, Maxie L., relief	21174
6010	Steinaker Dam, design and construc-	Stevens, Richard F., Jr., tungsten	20516
	tion, technical record	Stevenson, F. D., vapor pressure of	
	Steiner, Roy, measured characteristics	tungsten (VI) chloride and	
	of severe storm turbulence	hafnium (IV) iodide by metal	
18671	Steinert, Leon A., quantum field	diaphragm technique	9500
3619	theoretic techniques and elec-	Stevenson, Joseph H.:	
	tromagnetic properties of uni-	cotton in Spain	15933
3620	formly magnetized electron	cotton production in Central	
3621	gas	America	2348
	Steinhilber, August W., Bible reading	Stewards, 3 & 2, Navy training	
	in public schools	course	16796
18697	Stellar astronomy, USSR	Stewart, Clyde E., desert land act in	
21693		mid-twentieth century	12310
		Stewart, Helen E., characteristics of	
		scientific journals	21864



# INDEX 1964

Entry	Entry
Stewart, J. W., infiltration and permeability of weathered crystalline rocks, Georgia Nuclear Laboratory, Dawson County, Ga.-----	8753
Stewart, Joseph K., hydrocooling vegetables, practical guide-----	1708
Stewart, Roger B., flow evaluation in arc-heated hypersonic wind tunnel-----	14877
Stewart, Walter J., testimony, hearings-----	8456
Stickley, C. Martin, transverse modes of ruby lasers using beat frequency detection and fast photography-----	19165
Stiffeners (aircraft): ring, influence on instability of orthotropic cylinders in axial compression-----	21775
Stiletto, Annie Z., relief-----	440, 1875
Still-birth, gestation periods at which fetal deaths are registered, State definitions of-----	11579
Stillling basins, hydraulic design-----	9743
Stillwater complex, low-grade-chromites, beneficiating-----	13124
Stillwater County, Mont., Mount mine, mining methods and costs-----	5475
Stimulants, growth-stimulants, development and study, USSR conference, report-----	21507
Stimulators, electric, electrodes implanted by new method, USSR study-----	1163
Stimulus: and field size effects on accuracy of orientation in homogeneous environment-----	20701
nystagmus responses of cat to rotation and directionally equivalent and nonequivalent stimuli after unilateral aborbic habituation-----	1790
Stings (aircraft): diameter effect on aerodynamic characteristics of slender bodies at Mach numbers from 1.57 to 2.86-----	1465
Stipp, Henry E., bromine-----	13102
Stochastic differential equations analysis-----	12
Stochastic processes, see Probabilities (mathematics).	
Stock catalogs, see Catalogs—Government supplies.	
Stock exchanges, transactions, statistical series releases, SEC-----	4053
Stock ranges, see Range lands.	
Stockholders, Federal reserve member banks largest stockholders-----	21204
Stockpiling, see Strategic materials.	
Stocks: constructive ownership rule, amend-----	17412
law reports-----	15700, 17616
registered loans by banks for purchasing, etc., regulations-----	683
on national securities exchange, list-----	10544
savings and loan associations, insured, average annual dividend rates paid-----	8545
see also Securities.	
Stockstad, Dwight S., conversion tables for use with national fire-danger rating system in intermountain area-----	12454
Stockton, Calif., port, harbor conditions, etc.-----	10493
Stockwell, Homer J., snow survey and soil moisture measurements for Western United States, including Columbia River drainage in Canada-----	15089
Stockwell, Robert P., Spanish basic course, units 31-45-----	15104
Stockyards: packers and stockyards act— as it applies to auction markets, as it applies to livestock dealers, questions and answers for livestock producers-----	4179 5788 4180
text, regulations, and policy-----	11738
packers and stockyards résumé-----	3833
Stoeckeler, Joseph H.: early survival of planted trees in southwestern Wisconsin by species, age classes and site factors-----	774
ground preparation costs and 1st-year survival of planted red pine in southwestern Wisconsin-----	775
Stokes, Donald R., evaluation of specified shrink films for prepackaging frozen cut-up chickens-----	11772
Stokes, Mary E.: occupational wage surveys— Chicago, Ill.-----	16599
St. Louis, Mo., Ill.-----	7410
Wichita, Kans.-----	1383
STOL, see Aircraft—Airplanes.	
Stone, M. K., field experiments for control of cabbage insects-----	13563
Stone, Ralph W., Jr., observations during weightlessness with subject immersed in rotating water tank-----	20585
Stone: minerals yearbook chapter-----	21721
Sheldon Memorial Art Gallery construction, duty-free entry-----	14089, 17230, 17580
Stone fruit, survey of clones in United States-----	1676
Stonemasons, see Masons.	
Stoner, John E., interlocal governmental cooperation, selected bibliography-----	5841
Storage: civil defense emergency hospitals— pre-positioned and training, storage locations-----	15052
storage structures-----	5654
devices, materials of scientific conference on nuclear physics and linear accelerators, Oct. 10-14, 1961-----	15278
household storage study-----	4697
structures, use of wood-----	14313
technical manuals-----	109, 4290
see also names or classes of articles stored.	
Storage bins, see Bins.	
Storage in major power reservoirs in Columbia River basin-----	4058
Storch, Richard H., titanium placer deposits of Idaho-----	1435
Storekeepers, see Aviation storekeeper.	
Stores: arrangement and display, bibliography-----	15079
bookstore operation-----	5680
chainstore violations of antitrust laws, investigation by FCC, authorize hearings-----	10415
department stores— credit, monthly report-----	3416
merchandising data, monthly report-----	3417

# JANUARY-DECEMBER

Entry	Entry	Entry
	<b>Stores-Continued</b>	<b>Storms-Continued</b>
	department stores-continued	National Severe Storms Project--
	sales--	aircraft investigations of squall
	annual distribution by months--	lines, development 1958-60--
15089	distribution by departments--	11693
15104	indexes, without seasonal adjustment--	field operations--
	monthly report--	and data collection, spring
4179	selected cities and areas, weekly percentage changes--	1961, summary--
5788	weekly index--	spring 1962--
4180	sales and stocks, monthly report--	spring 1963--
11738	stocks--	objectives and basic design--
3833	indexes, without seasonal adjustment--	operations, 1962, analysis of selected aircraft data--
	monthly report--	reports (series)--
	stocks-sales ratios--	11692-709, small-scale surface network data, analysis methods--
	employee earnings--	11707
	miscellaneous retail stores, June 1962, retail stores and proprietary stores--	surface network, index--
774	retail building materials, hardware, and farm equipment dealers, 1962--	11697
775	retail food stores, 1962--	power spectral measurement of atmospheric turbulence--
	location, bibliography--	20596
11772	photographic dealers and studios, bibliography--	prediction--
	retail--	instability lines, etc., as shown by aircraft soundings--
16599	apparel and accessory, employee earnings--	vertical structure of 3 dry lines as revealed by aircraft traverses--
7410	customer service for produce departments--	11698
1383	dairy products, improved handling--	11705
13363	food, breakage and damage--	severe--
	food stamp program impact on sales in Avoyelles Parish, La--	analysis in automatic control of air route traffic--
20585	furniture, home furnishings, and household appliances, employee earnings--	11702
21721	general merchandise, department stores, etc., employee earnings--	11699
14089	hardware, bibliography--	500-kc./sec. aerics studies--
0, 17580	produce display work methods--	11703
1676	produce sales area arrangement--	turbulence, measured characteristics--
	sales, advance monthly--	11700
	sales, monthly--	spongy hail, radar reflectivity--
5841	sales, weekly--	19152
	small, recordkeeping systems, bibliography--	storm-period variables affecting stream sediment transport, analysis--
	variety, bibliography--	10646
15032	see also Commissaries.	see also Thunderstorms-Tornadoes.
5654	Stories worth knowing--	Storr, John F., ecology of Gulf of Mexico commercial sponges and its relation to fishery--
	<b>Storms:</b>	14283
	coastal warning facilities charts--	Stough, Ada E., rural county cases for its aging, story of Aitkin County, Minn.--
15278	Canadian border to Eureka, Calif. and Alaska--	11717
4697	Cape Hatteras, N.C., to Brunswick, Ga.--	Stout, R.D., geometric effects of plate thickness--
14313	eastern Florida--	9761
09, 4290	Eastport, Me., to Montauk Point, N.Y.--	Stout, Virginia F., effects of ionizing radiation on lipids of fish--
	Eureka to Point Conception, Calif.--	19251
4058	Hawaiian Islands--	Stover, W. F., convey certain lands in Boulder County, Colo., to--
1438	Manasquan, N.J., to Cape Hatteras, N.C., and Chesapeake Bay--	6268
	Montauk Point, N.Y., to Manasquan, N.J.--	Strack, William C., a-body code, general Fortran code for numerical solution of space mechanics problems on IBM 7090 computer--
15079	Morgan City, La., to Apalachicola, Fla--	1453
5680	Point Conception, Calif., to Mexican border--	Strain gages, mercury, calibration--
	Puerto Rico and Virgin Islands--	19148
10415	data, monthly--	Strained relations among European trade union federations--
3416	motion and predictability of convective systems as related to upper winds--	18358
3417		<b>Strains and stresses:</b>
		aeronautical structures, buckling load, imperfections, main contributor to scatter--
		19000
		aircraft structural failures caused by corrosion, fatigue and a brasion, engineering survey--
		19001
		alumina balls, surface failure due to repeated stresses applied in rolling contact at temperatures to 2000° F--
		13227
		aluminum alloys, fatigue life, effect of prior stress--
		16688
		brittle fracture propagation studies--
		1575
		buckled circular plates, frequencies and modes of vibration--
		7568
		crack extension force dependence on crack length for single-edge-notch tension specimen--
		16707
		cryofomed AISI stainless-steel pressure vessels at cryogenic temperatures, tensile coupon tests--
		21763

# INDEX 1964

	Entry		Entry
Strains and stresses—Continued		Strains and stresses—Continued	
cylinders—		random responses, prediction of	
influence of prebuckling deforma-		peaks, fatigue damage, and	
tions and stresses-----	7561	catastrophic failures-----	9535
orthotropic, instability in axial		residual stresses appearing during	
compression, influence of ring		machining of metals, X-ray	
stiffeners-----	21775	diffraction analysis, USSR	
sandwich construction, classical		study-----	2674
buckling in axial compression,		results from full-scale measure-	
thick wall, subjected to radial		ments of midship bending	
pressure and axial strain-----	8639	stresses on 2 C 4-S-B5 dry	
cylindrical shells, post-buckling be-		cargo ships operating in North	
havior-----	11422, 13261	Atlantic service-----	18938
determination of stresses in flexible		rock stresses—	
plates and shells by method of		determinations by flatjack and	
photoelastic coatings-----	14925	borehole-deformation meth-	
Douglas-fir curved laminated beams,		ods-----	9517
stresses within-----	8640	in situ, Rainier Mesa, Nevada	
Echo A-12 satellite, buckling		test site-----	19256
edgewise compressive buckling of		in situ, Ruth mining district,	
flat sandwich panels-----	12442	Nev. with emphasis on slope	
effect of stresses on quality of sil-		design problems in open-pit	
icide coatings on molybdenum,		mines-----	20512
USSR study-----	1012	monitoring station developed	
elastic constants of stress relief		based on flat slot method-----	21710
cores determined by triaxial		sheet metals, behavior under bi-	
method-----	16640	axial stress, USSR study-----	5369
elastic stress distribution in ortho-		steel—	
tropic plate containing crack,		E-steel, ductility exhaustion and	
fatigue—		brittle fracture caused by pre-	
and deformation in single crys-		strain and aging-----	16853
tals ultrasonic methods in		heat-treated 4340, fatigue crack	
study-----	4223	effect on notch strength and	
behavior of AM-350 stainless		fracture development in cy-	
steel and titanium-8-A1-1Mo-		lindrical specimens-----	5588
IV sheet-----	13139	heat-treated 4340, specimen size	
life, influence of load randomiza-		effect on fatigue crack strength	
tion and ground-air-ground		of cylindrical specimens-----	13335
cycles-----	21746	high-strength, stress-corrosion	
low-cycle, crack propagation		cracking, etc-----	13342
studies, rotating-beam test-----	18864	mild, low-stress brittle fracture,	
mechanical cycling behavior of		stainless, axial-load fatigue	
materials for supersonic trans-		properties-----	14887
port, exploratory studies-----	11351	strain-cycle phenomena in thin-	
process, rolling-contact, in crys-		fall tubing-----	19232
tallized glass ceramic-----	3030	strength of short and intermediate	
tips on fatigue-----	13367	wood columns of experimental	
finite element solution for thin		and analytical methods-----	12448
shells of revolution-----	14768	stress directions, determining	
high-temperature tensile testing in		through rock joint analysis,	
vacuum, apparatus facilitates-----	14805	etc-----	11320
hot structure for lifting reentry ve-		stress field within core stub in bore-	
hicles, thermal-stress features,		hole-----	11344
etc-----	11385	stress-intensity factors for single-	
metal fatigue and cyclic stress,		edge-notch tension specimen	
USSR study-----	14465	by boundary collocation of	
metallic materials and elements for		stress function-----	16706
flight vehicular structures-----	12303, 14162	tensile properties of—	
moving vehicles, stresses under dis-		filament-winding plastics-----	18862
tribution on unyielding surface		handsheets, effect of restraint	
beneath stationary and towed		during drying-----	18079
pneumatic tires-----	15878	tungsten, effects of interstitial	
natural frequencies in coupled bend-		impurities-----	14851
ing and torsion of twisted ro-		tensile strength of plastics, com-	
tating and nonrotating blades-----	14778	putation from static strength	
nickel-base alloys, effect of 2 braze		data-----	10482
coatings, etc., on 1200° F.		thermal midplane stresses, plates,	
stress-rupture strength of L-		finite differences energy meth-	
605, A-286, and Inconel 700		od evaluation-----	18767
sheet-----	1454	thermal shock—	
nonlinear response of windows to		evaluation of refractory materials	
random noise-----	3018	as rocket nozzle inserts-----	13331
normal mode theory, elements-----	13330	studies of ceramic materials-----	13338
panel flutter, effects of thermal		thermal stresses and deflections in	
stress and buckling-----	3022	rectangular panels-----	4227
phenolic laminates under repeated		thermal stresses and temperature	
load, fatigue strength-----	12447	distribution-----	13436
plastic thermal stresses and strains		titanium alloys, hot-salt stress-	
in finite thin plate of strain-		corrosion cracking phenome-	
hardening material, analysis-----	21764	non-----	21730
prestressed monolithic and seg-		titanium and stainless-steel alloys	
mented brittle structures-----	21728	and superalloy, fatigue-crack	
pushing tube through draw plate,		propagation-----	20587
investigation, USSR-----	2809	tungsten, arc-melted, effects of pu-	
		riety and structure on tensile	
		properties-----	21776

# JANUARY-DECEMBER

Entry	Entry
	Strains and stresses—Continued
9535	uniform-stress spinning filamentary disk-----
	20527
	wind stresses in pole building frames-----
	18061
2674	working stresses for structural design, engineer manual-----
	4604
	see also Shear (mechanics).
	Straps, buckle joins web straps quickly, adjusts easily-----
	14827
18938	Strasser, Arnold, employer expenditures for selected supplementary compensation practices, etc., meatpacking and processing industries, 1962-----
	14706
9517	Strategic materials:
19256	critical material stockpiles, draft report, committee print-----
	6493
	disposal of antimony from national stockpile-----
	hearing-----
	17636
	law-----
	19423
	reports-----
	17528, 17852
21710	disposal of cadmium from national stockpile-----
	hearing-----
	10293
5369	law-----
	13869
	reports-----
	10253, 12207
	disposal of certain materials from national stockpile, reports-----
	17531, 17853
	disposal of lead from national stockpile-----
	hearings-----
5588	law-----
	15390
	reports-----
	13936, 14095
13335	disposal of molybdenum from national stockpile-----
	hearing-----
13342	law-----
5677	15394
	reports-----
	13935, 14094
14887	disposal of pig tin from national stockpile-----
	hearings-----
19232	reports-----
	13932, 14097
	disposal of sisal from national stockpile-----
12448	law-----
	16425
	report-----
	17529, 17851
11320	disposal of zinc from national stockpile-----
	hearing-----
11344	law-----
	15391
	reports-----
	13947, 14096, 19491
16706	Federal stockpile inventories, report-----
	3212
18862	materials reserve and stockpile act of 1963, hearings-----
	4572, 6494
18079	materials reserve and stockpile act of 1964-----
	effect of S. 2272 on defense production act inventories, hearing-----
14851	report-----
	15801
10482	stockpile as instrument of national security (address)-----
	12206
18767	stockpile report-----
	2291
	stockpiling cordage fibers, questionable need, GAO report-----
13331	stockpiling of minerals and metals, review, hearings-----
13338	10318, 14006
4227	unnecessary costs to Government by not using surplus stockpiled materials to satisfy defense contract needs, Air Force Dept., GAO report-----
13436	10617
21730	Strategy, see International relations—Military art and science.
20587	Stratford, Conn.:
	hurricane survey, engineer report—
	departmental edition-----
21776	document edition-----
	8519, 8261

Entry	Entry
	Stratigraphy:
	and paleoecologic significance of Foraminifera from Tertiary sequence-----
	8766
	biostratigraphic separation of bottom sediments in equatorial Pacific, USSR study-----
	7179
	Cenozoic geology of part of basin of Pleistocene Lake Lahontan-----
	10639
	contributions to stratigraphic paleontology (series)-----
	18110
	contributions to stratigraphy (series)-----
	19779-780
	Cretaceous, McCarthy A-4 quadrangle, southern Alaska-----
	18110
	Dripping Spring quartzite, southeastern Arizona-----
	8758
	glossary of terms-----
	8771
	Matanuska formation in Matanuska Valley, Alaska, reconnaissance-----
	14339
	Montana, Belt series and related rock with stratigraphic classification, data on-----
	4786
	Niobrara formation at Pueblo, Colo-----
	14344
	Permian rocks of southwestern Montana-----
	15946
	smaller Foraminifera, general stratigraphic relationships and relationships and assemblages-----
	10645
	structure and oil resources of Prado Dam and Yorba Linda quadrangles, study-----
	10641
	structure of Cenozoic sedimentary rocks in part of Salinas Valley, study-----
	12506
	structure of northern and western flanks of Black Hills uplift, Wyo., Mont., and S. Dak-----
	21354
	Taconic stratigraphic names, definitions and synonyms-----
	8759
	Wroming, western Permian rocks-----
	2420
	Stratis, Christos, relief-----
	19543
	Stratosphere:
	and mesosphere, USSR study-----
	1232
	cosmic ray intensity caused by solar processes, USSR study-----
	16319
	Straub, Conrad P., low-level radioactive wastes-----
	15290
	Strawberries:
	culture, Eastern U.S-----
	16951
	varieties in U.S., general information-----
	20912
	Streams, see Rivers.
	Streets:
	and related facilities, excessive costs allocation to Northside urban renewal project, Kansas, City, Mo., Urban Renewal Administration, HHFA, GAO report-----
	19754
	work injuries and rates in highway and street construction industry-----
	2900
	Strength of materials:
	and structural elements, at high temperatures, conference, USSR-----
	10786
	sandwich construction, affected by size of cells of honeycomb-core materials-----
	12446
	see also names of materials and articles.
	Streptococcal infections, selected references-----
	1564, 15043, 18918
	Streptomycin, prolonged action by use of polyvinyl pyrrolidone, USSR study-----
	5068
	Stresemann, Wolfgang, relief-----
	6269, 11990
	Stress (psychological), see Tension.
	Stress cracks and breakage in artificially dried corn-----
	34
	Stresses (mechanical), see Strains and stresses.



# INDEX 1964

Entry	Entry
Strickler, Paul E., liquid petroleum fuel used by farmers in 1959--	9964
Strikes and lockouts:	
work stoppages--	
analysis 1962-----	1377
50 States and District of Columbia, 1927-62-----	2959
monthly release-----	4164
Strip-mined lands, predicting out-slopes of spoil banks-----	772
Strip mines, <i>see</i> Coal mines and mining.	
Strobbeln, Roger W., ownership of rural land in Southeast-----	4611
Strokes:	
cerebral vascular disease and strokes-----	18904
hope for recovery through research, progress in cerebrovascular disorders, summary-----	7586
rehabilitation program--	9646
guidelines with model plan for community action-----	13399
inservice training for care facility personnel in Oregon-----	20749
stroke is a community problem-----	11561
up and around, booklet to aid stroke patient in activities of daily living-----	9729
Strong, Merle E., curriculum materials for trade and industrial education-----	13422
Strontium:	
migration through quartz sand-----	8479
minerals yearbook chapter-----	5991
titanate radiolotope fuel production for SNAP 7B thermoelectric generator-----	14765
Strontium isotopes:	
Sr-89, effect on microflora of biological filters, USSR study-----	5968
Sr-90--	
Atlantic Ocean surface waters, USSR study-----	9177
content of food products, changes after cooking, USSR study-----	10901
distribution characteristics in skeleton of dogs after single and long-term administration, USSR study-----	10759
health hazard in milk-----	1251
in foods at intermediate stages of preparation for canning and freezing-----	18901
milk, farming practices effect on concentration-----	20770
Stroud, Raymond B.:	
manganese resources of Batesville district, Ark., field investigations, July 1956-June 1961-----	16833
mineral industry of Arkansas-----	14760
Stroud, W. Jefferson, elastic constants for bending and twisting of corrugation-stiffened panels-----	1407
Structural behavior of composite materials-----	20618
Structural designs, <i>see</i> Architecture.	
Structural materials, <i>see</i> Materials.	
Structural steel, <i>see</i> Steel.	
Structures, <i>see</i> Buildings--Earthwork and structures--Shore protection--Strains and Stresses--Vibration.	
Stubbs, Sandy M., landing characteristics of reentry vehicles with passive landing system for impact alleviation-----	14784
Studebaker Corporation, South Bend, Ind., plant closing, report-----	5512
Student-learners, employment, pursuant to Fair labor standards act-----	13656
	11680
Students:	
aids, financial and other assistance through programs of Department of Health, Education, and Welfare, guide-----	21365
college--	
career opportunities in Federal service-----	4388
career opportunities in Public Health Service-----	18895
junior-year science, mathematics, and foreign language, survey, 1962-----	10467
residence and migration, fall, 1963-----	21271
survey, highlights-----	10465
college is time for idealism and vision (address)-----	20721
enrolled for advance degrees, fall 1963, summary report-----	15857
enrolled for higher degrees, fall 1962-----	609
financial aids, publications, announcement and order form-----	12326
higher education, assistance act of 1964--	
hearings-----	14151
report-----	17804
modern foreign languages, handbook for guiding-----	2273
national defense education act of 1958, extend and amend law--	
hearings-----	17646
law-----	21157
reports-----	15530, 15732, 17575, 19483
optometry, loan program, extend to--	
hearings-----	15593
law-----	21146
reports-----	17547, 17760, 19459
pilot guide, general information-----	15932
prospective students from other countries, guide-----	10469
pupil personnel services-----	5450
summer employment and field experience of undergraduates in social work, guide-----	13533
summer job experience, public welfare--	
career sampling for college students-----	9885
need for young and imaginative staff-----	9886
summer trainee, Weather Bureau, report 1963-----	16921
therapeutic use of student volunteers-----	17116
thinking about your first job? remember Uncle Sam-----	10107
trainees--	
cooperative and vacation work-study programs, examination announcement amendment-----	205
examination announcement, discontinuance notice-----	4384
transportation, State supervisors, directory-----	4647
undergraduate, financing education, U.S. student and leader exchanges, hearings-----	8485
Studer, Philip A., brushless dc motor for satellite application-----	2112
Studies (North Vietnam periodical):	
translations-----	898
1160, 2606, 2779, 2918, 5188, 6877, 7318, 7322, 7336, 9040, 9264, 9350, 10859, 10883, 11006, 12682, 16005, 16057, 18221, 19979, 20319.	
Study, <i>see</i> Curriculum.	
Study Commission on Southeast River Basins, <i>see</i> United States Study Commission, Southeast River Basins.	

# JANUARY-DECEMBER

Entry		Entry	
	Stullk, R. S., geology and ground water of Luke area, Ariz.-----	14356	Subminiature biotelemetry unit permits remote physiological investigations-----
	Stull, Luther D., relief-----	15663	20562
21365	Sturgeons: caviar and other fish roe products. caviar, firms canning, caviar and fish roe, list-----	19728	746
4388	hemoglobin types in young, USSR study-----	2638	Subpenas: power for Commission on Assassination of President Kennedy-----
18895	oocytes, metaphase of 1st maturation division, USSR study-----	1240	law-----
10467	STX, Fortran 4 program for estimates of tree populations from 3P sample-tree-measurements-----	18083	report-----
21271	Style manual, Armed Forces news style guide-----	17080	Subsides, see names of commodities, industries, etc.
10465	Styrene polymers, see Polymers and polymerization.		Subsistence: Federal item identification guides for supply cataloging-----
20721	Su, C. H., kinetic theory of weakly coupled gases-----	11861	supplements-----
15857	Subarctic region, survival, simulated situations, caloric cost, fluid and electrolytic balance-----	19140	Subsistence stores, subsistence supplies, inspection and storage, Army technical manual-----
609	Subcontracts, see Government contracts.		Suburban and farm vegetable gardens. Suburbanites, publications, list-----
12326	Subdivision of land, see Land.		Subversive activities, see Un-American activities.
14151	Subject headings: Armed Services Technical Information Agency, descriptors thesaurus, supp-----	14165	Subversive Activities Control Board: appropriations, 1964-----
17804	Bureau of Ships Technical Library, thesaurus of descriptive terms and code book-----	20779	hearings-----
2273	Library of Congress-----	4061	law-----
17646	Sublette, James E., chironomid midges of California, etc-----	3583	report-----
21157	Submarine boats: atmosphere studies aboard USS Sculpin-----	7601	appropriations, 1965-----
19483	Casimir Pulaski, USS, launching (remarks)-----	18865	hearings-----
15593	construction, per diem payments to military personnel, Navy Dept., GAO report-----	5633	law-----
21146	nuclear powered-----	8742	reports-----
19459	atmosphere hydrocarbon analyser, development-----	13345	report, 1963-----
15932	atmosphere purification and control, status of chemical research-----	18863	Success and failure factors in small business-----
10469	atmosphere purification, diaphragms for sulfate cycle electrolytic cell-----	5615	Sudan: agricultural commodities, agreement-----
5450	components, overpayments made under cost-plus-a-fixed-fee contract from Combustion Engineering, Inc., GAO report-----	6774	Army area handbook-----
13533	components, overpricing under Westinghouse cost-plus-a-fixed-fee contracts, GAO report-----	6776	economy, basic data-----
9885	components, overpricing under Westinghouse subcontracts, GAO report-----	6777	investment guaranties, agreement-----
9886	oxygen production by algae-----	5602	Suddath, Jerrold H.: minimum drag bodies with cross-sectional ellipticity-----
16921	submarine in United States Navy-----	18846	sufficient conditions for stability in the large of nonlinear system of differential equations-----
17116	sulfate cycle for carbon dioxide removal and oxygen generation-----	13340	synthesis technique of constant linear dynamical systems with bang-bang controller-----
10107	Thresher, in memoriam, Apr. 10, 1963-----	15016	Suddreth, Jack A., national altitude rocket test facilities-----
7517	training manual, basic enlisted, text-----	3077	Suehs, Erwin A., relief-----
898,	World War II, United States losses-----	16784	Suffolk County, N.Y.: chemical quality of water, Brookhaven National Laboratory vicinity-----
5188,	paster-----	21821	clivity-----
9040,	Submarine cables, data from carriers' reports-----	3817	hydrogeology of Huntington-Smithtown area-----
11006,	Submarine crews: Soviet, garrison life, glimpse of-----	8906	hydrology of Babylon-Isip area-----
18221.	Thresher, in memoriam, Apr. 10, 1963-----	15016	Sugar: act, extend and amend, hearing-----
	Submarine research, see Oceanography.		determinations of prices, shares, and wage rates-----
	Submerged lands, see Land.		exports to U.S., data by countries, 1961-63-----
			foreign agriculture circulars-----
			futures trading on N.Y. Coffee and Sugar Exchange-----
			international agreement of 1958-----
			prolongation, report-----
			protocol prolonging, text-----
			maple, variation in content in budded clone-----
			production in Louisiana-----
			requirements and quotas-----
			sugar reports-----
			4062
			Sugar beets: culture in North Central States-----
			fertilizers, USSR study-----
			grown for seed, insects affecting-----
			high yields at minimum expense, Soviet agriculture, translations-----
			USSR research results, 1959-60-----
			7243
			Sugar Grove, W. Va., see Naval Radio Research Station, Sugar Grove.

# INDEX 1964

Entry	Entry
Sugar maple, <i>see</i> Maple.	Sun :
Sugar pine, <i>see</i> Pine.	chromosphere, fine structures
Sugarcane, culture for sugar production in Louisiana-----	study-----
Suggestion systems, employee suggestion system for small companies-----	chromospheric flares, nuclear processes-----
Suits, woman's, how to tailor-----	cosmic ray intensity in stratosphere caused by solar processes, USSR study-----
Sulfates :	cyclic solar activity and weather forecasting, USSR study-----
cycle system for nuclear submarines, diaphragms for-----	eclipse of July 20, 1963-----
rare earth, naphthenic acid solvent extraction-----	ionospheric behavior, Bedford, Mass-----
<i>see also</i> Sodium sulfate.	solar flux measurements-----
Sulfatization of manganese minerals and selected gangue materials-----	ephemeris, 1965-----
Sulphydryl, tissue sulphydryl groups in irradiated animals, effect of protective substances on changes in reactivity-----	extraterrestrial spectrum, temperature of gray body most closely fitting-----
Sulfides :	magnetic field, structure in active region-----
arsenic, germanium, and nickel, low temperature heat - capacities and entropies at 298.15°K-----	Orbiting Solar Observatory project, weaknesses in management, GAO report-----
extraction from petroleum fractions by conversion to sulfonium salts-----	photosphere, magnetic field gradient, determination-----
surface energies-----	radio emission, velocity of corpuscular streams in solar corona based on observations-----
<i>see also</i> sulfides by name, e.g. Iron sulfide.	secular perturbations, Halphen's method applicable to long range effects in motions of celestial bodies-----
Sulfite pulp, <i>see</i> Wood pulp.	solar orientation control system for spacecraft-----
Sulfonates, alkali-metal dinonylnaphthalene solubility-----	solar proton manual-----
Sulfur :	solar XUV spectrum from 310Å to 55Å-----
biogeochemistry, USSR study-----	<i>see also</i> headings beginning Solar.
crude oils, Eastern and Western Hemispheres, hydrocarbon-type relationships-----	Sunflower solar collector-----
minerals yearbook chapter-----	Sunflowers, seeds and accumulation of reserve substances, electron microscope study, USSR-----
native and recovered, mineral industry survey, monthly-----	Sunnyvale, Calif. : land exchange-----
plant nutrient in southern U.S.-----	law-----
production, etc., 1963-----	reports-----
resources and production in Texas, etc-----	Sunrise effects on east-west ionospheric propagation paths-----
Sulfur dioxide :	Sunspots, coolness, theoretical model, errata-----
adsorption and recovery from industrial gases by using synthetic zeolites-----	<i>see also</i> Faculae.
improved fumigation of grapes in railway refrigerator cars-----	Superalloys, <i>see</i> Alloys.
Sulfuric acid :	Superconductivity :
current industrial report-----	alloys, physics, USSR study-----
use of pickle liquor in manganese extraction-----	magnetically-supported spinning body, theoretical and experimental study-----
Sullivan, Gerald V. beneficiating chromites from Stillwater complex-----	shaped superconductor cylinder retains intense magnetic field-----
Sullivan, John J., YAT-37D systems evaluation-----	Superconductors :
Sullivan, William H., trilinear chart of nuclides, revision sheet-----	anisotropic, potential advantages in force-free solenoids-----
Sumdum, Mt., southeastern Alaska, Sumdum copper-zinc prospect, geology-----	hard, evidence of degradation effects in short samples-----
Summer sessions in colleges and universities of United States, 1960-----	Superheaters :
Summers, L. G., human tracking performance under transverse accelerations-----	BONUS, boiling nuclear superheater power station final summary design report-----
Summers, Robert L., cesium vapor effects on ionization gages-----	nuclear superheat project-----
Sumner, Irving E., viscous damping of liquid sloshing in spherical tanks-----	11th quarterly report-----
Sumter County, Ga., geology and ground-water resources-----	14th quarterly report-----
Sun, Pao-Chang P., large springs of east Tennessee-----	Superheterodyne receivers, <i>see</i> Receivers (radio).
	Superior, Wis. : area redevelopment manpower report-----
	wholesale fruit and vegetable markets, organization-----
	Superior, Lake, iron ores of region, R-N process application, engineering studies-----
	Superior National Forest, recreational use of Quetico-Superior area-----

# JANUARY-DECEMBER

Entry	Entry
Supernovae, neutrinos, and neutron stars, final evolution.....	14845
Superphosphates, <i>see</i> Phosphates.	
Supersonic airplanes, <i>see</i> Airplanes.	
Supersonic flow, <i>see</i> Flow.	
Supervisors:	
crop insurance, examination announcement.....	8164
development program, basic course, relationships with employee organizations.....	5941
HHFA, and equal employment opportunity policy.....	8791
safety training.....	1364
State, trade and industrial education, directory.....	4617
training and development program maintaining work flow.....	5686
planning and organizing work.....	5689
training course, interviewing and counseling.....	15082
worker and supervisory agreement worker's job description.....	15232
Supervisory handbook HHFA.....	8791
Supplemental appropriations and estimates <i>see</i> Appropriations.	
Supplies <i>see</i> Agricultural supplies—Government supplies—Hospital apparatus and supplies—Medical supplies—Military supplies—Subsistence stores.	
Supply and demand:	
demand and price situation.....	3412
organization of material-technical supply and material balances fundamentals USSR study.....	14615
Philippine agricultural products implication for U.S. exports.....	2264
textile fibers in U.S.....	44
world newprint outlook through 1966 report.....	19466
Supply catalogs <i>see</i> Federal supply catalogs—Military supplies.	
Supply facilities, Navy design manual, changes.....	3203
Supreme Court:	
cases adjudged—	
Court of Claims cases.....	551-552
6531, 12286-287, 19611.....	3812
official reports.....	1625, 5716
United States reports.....	1625, 5716
clerk payment of salaries by marshal—	
hearings.....	8455
law.....	8218
report.....	6480
journal.....	4070
jurisdiction, defining, report.....	17577
Justices' widows, increase annuities, reports.....	15507, 17540
opinion on Bible reading in public schools, explanation.....	571
opinions on Bible reading and prayers in public schools, print additional copies, reports.....	4456, 4534
pages, residence—	
hearing.....	546
report.....	14087
staff report.....	10436
promulgate rules of practice and procedure under bankruptcy act—	
law.....	19431
report.....	19559
Supreme Court Building:	
District of Columbia, acquisition of grounds—	
hearings.....	2122
report.....	349
Sureties, <i>see</i> Guaranties and sureties.	
Surface active agents, economic potential of surfactants made from fats and oils.....	10455
Surface energy balance in arid lands agriculture 1960-61.....	4219

Entry	Entry
Surface energy of certain oxides, sulfides, and selenides.....	3038
Surface properties of iron-carbon alloys.....	3037
Surface water, <i>see</i> Water.	
Surfaces:	
aerodynamic, mechanisms for burnishing, synthesis, USSR study.....	9326
ellipsometry in measurement of surfaces and thin films, symposium proceedings.....	21782
polynomial surface fitting using sample data from underground copper deposit.....	18704
roughness effect on boundary-layer transition and heat transfer at Mach numbers of 4.8 and 6.0.....	11378
Surfactants, <i>see</i> Surface active agents.	
Surgeon General, Public Health Service, <i>see</i> Public Health Service.	
Surgeon General's Advisory Committee on Smoking and Health:	
report.....	5064
excerpts.....	16845
summary.....	21858
Surgery:	
Bulgarian Scientific Association of Neurology, Psychiatry, and Neurosurgery, activities report.....	12980
burns, USSR studies.....	9068, 9207
cardiac—	
electroencephalographic changes under conditions of artificial circulation and comparison with postoperative neurological picture.....	11234
NHI supported research grants.....	16743
cardio-vascular, Soviet survey of published literature, 1959-63.....	9267
changes of morphological and functional properties of blood and hemodynamics during work with extracorporeal circulation apparatus, USSR study.....	5228
dental, during anticoagulant therapy.....	5650
ganglion-blocking preparations, Soviet application.....	1111
heart—	
intercardiac operations analyzed, USSR.....	12772
open heart, extracorporeal circulation, adrenal cortex function, USSR study.....	12759
USSR articles.....	12999
intervention in injuries, USSR studies.....	1167
liver and bone, techniques, USSR studies.....	9123
liver resection, with use of alloplastic materials, USSR study.....	10963
lung and plastic, USSR translations.....	970
muscle relaxants use, USSR studies.....	21448
neurological care system, comprehensive restorative therapy and training of personnel, USSR articles.....	14634
neurosurgery in USSR.....	16266
neurosurgery, scientific research work, development of biological trend, perspectives, USSR study.....	9012
pediatric, course of development, USSR study.....	18319
plastic, outstanding achievements, USSR.....	12652
teaching, USSR study.....	10964
techniques, instruments, drugs and other surgical studies, USSR.....	6898
thoracic, aspects, USSR.....	9039



# INDEX 1964

	Entry		Entry
<b>Surgery—Continued</b>		Svalbard, gasometer, official standard	
treatment of thermal burns, USSR		study	18067
study	9297	Svehlis, Roger A., thermodynamic	
use of medicines in surgical prac-		and transport properties for	
tices, USSR studies	12919	hydrogen-oxygen system	18787
use of plastics, USSR	2858	Swainson, William O., relief	18485
USSR		Swana, Robert T., approximate analy-	
methods	5393	sis of performance of char-	
neurosurgery, literature survey	7209	forming absorbers	18255
practices	9211	Swanson, Harold J., Jr., U-10B li-	
research	16364	ght category 2 performance	
scientific research in next few		tests in landplane and boat-	
years	9082	plane configurations	9975
some phases	1015	Swanson, Howard E., X-ray diffrac-	
vascular and bone grafts, USSR		tion powder patterns	18739
articles	20175	Swanson, L. W., thermal desorption	
World War II, activities of surgical		and surface diffusion of cesium	
consultants	10022	on tungsten	5500
see also <i>Exodontia—Transplanta-</i>		Swartzendruber, Lydon J.,	
<i>tion (physiology)</i>		correction factor tables for 4-point	
Surgical instruments and apparatus,		probe resistivity measure-	
encapsulation process sterilizes		ments on semiconductor sam-	
and preserves instruments	16671	ples	9635
Surh, Michael T., radiation balance	9598	two-point and four-point probe re-	
Surplus military property, see <i>Surplus</i>		sistivity measurements on rec-	
property		tangular bar-shaped semicon-	
Surplus property:		ductor samples	13376
defense disposal manual	4600	Swarsenski, Welfgang V., hydrogeol-	
material available for science edu-		ogy of northwestern Namau	
cation, general information	10688	and northeastern Queens	
State agencies, directors, directory	10682	Counties, N.Y.	6516
see also <i>Personal property</i>		Swearingen, John J., air loads on	
Surplus Property Utilization Division,		man, studies	18728
directory	10662	Sweat, see <i>Perpiration</i>	
Surrey, Stanley S., remarks, Sept. 21,		Sweden:	
1964	20863	communications satellites, inter-	
Survey of current business, monthly	4071	continental testing, agree-	
Surveying:		ment	1604
construction surveying, Army tech-		convention on extradition	7783
nical manual	8038	double taxation, supplementary	
elements of surveying, technical		convention—	
manual	17051	ratification, report	15615
publications, price list	7633	text	6378, 21887
Surveyors, employment outlook	9412	economy, basic data	6851
Surveys, see <i>Community surveys—</i>		electronic products, market infor-	
also <i>subjects of surveys</i>		mation	21068
<b>Survival:</b>		extradition convention, report	424
Army Dept. field manual	15266	fisheries, 1962-63	6718
family food stockpile	16853	gas appliances, household and com-	
human survivability of extreme im-		mercial, U.S. market	147
pacts in free fall	1791	gasification patents, index	18660
knowledge for survival, newsletter		maritime matters, use of ports and	
to extension program leaders	3633	waters by U.S. Savannah,	
radium cases	18701	agreement	18976
space flight, emergency escape and		plant quarantine import require-	
restraint systems, biomedical		ments	16939
research studies, bibliography	13732	unemployment programs	12012
subacute simulated situations, cal-		Sweeney, John W., lightweight aggre-	
oric cost, fluid and electrolytic		gates	951C
balance	19140	Sweeney, Joseph M., international	
Survival kits, pararescue medical kit	9979	law of sovereign immunity	11625
Survivors insurance:		Sweet, George E., wind-tunnel mea-	
social security rulings	4040	surements on lifting rotor at	
your social security, basic informa-		high thrust coefficients and	
tion	3131, 9772, 21874	high tip-speed ratios	18785
see also <i>Old-age, survivors, and dis-</i>		Sweet gum:	
<i>ability insurance</i>		seeds, production and distribution	
Suski, H. M., moments of sampled		by four New Jersey stands,	
binomially distributed variable	13332	1962	8654
Susquehanna River and Valley:		site index of New Jersey stands,	
basin, West Branch, chemical qual-		relationship to soil and water-	
ity of surface water	4824	table	784
chemical character at Harrisburg,		Sweet potatoes, see <i>Sweetpotatoes</i>	
Pa., variations	828	Sweeteners used by food processing	
Suter, Ann C., labor in Nigeria	5435	industries	4613
Sutton, Doris C., determination of		Sweetgum, see <i>Sweet gum</i>	
cerium-144 in vegetation and		Sweetpotatoes:	
soil	13696	acreage marketing guides	5784
Sutton, Joseph A., leaching copper		acreage, yield, etc., by States and	
sulfide minerals with selected		seasonal groups, 1962-63	16384
autotrophic bacteria	11329	consumer packaging and decay	
Sutton, Willard H., bonding in oxide-		control	9947
fiber (whisker) reinforced met-	7660		

	Entry
Sweetpotatoes—Continued	
estimation and maintenance of sodium o-phenylphenate concentration in sweetpotato treating solutions	1675
flakes, recent research on marketing	21260
instant, flakes, household consumers acceptance of	12558
recipes	4205
Swalish, length-weight relationship and stomach contents of swellfish in York River, Va.	6707
Swets, John A., computer-aided learning of sound identification	15003
Swift, Calvin T.: plane electromagnetic waves passing through isotropic inhomogeneous plasma slab	14901
radiation from slotted-cylinder antennas in reentry plasma environment	7544
Swift, L. M., intermediate range earth motion measurements	119
Swift & Co., wage chronology, 1942-63	11273
Swine:	
breeds	2038
garbage-feeding, national status on control	2766
hog feeding unit, building plan	19096
ment-type hog	1704
pig crop report	7506, 13487, 16853
portable shade for hogs	19095
specific pathogens free hog production, economic aspects	8469
validated brucellosis-free herds, list	15199
Swinsow, George K.: shear zones in ice cap margin, Thule, Greenland	12343
tunneling in permafrost	10487
Switchboards, apparatus, current industrial reports	1819, 17102
Switches, see Electric switchgear.	
Switzer, Mary E., address, June 6, 1963	7635
Switzerland:	
dollar problem, report on factfinding trip abroad	10412
educational data	19628
market factors	10699
patents, translated	1809, 9855
selling in Switzerland	21082
trade mission report, 1963	4867
Symbols, Federal item identification guides for supply cataloging	8465
Symposiums:	
AEC series	13714
AEC, zirconium alloy development, proceedings, 1962	5961, 10028
anesthesiology, USSR transactions, control of cell division and induction of cancer	13285
deaf, driving and employability	9871
ellipsometry in measurement of surfaces and thin films, symposium proceedings	21782
and results of cancer therapy	21792
Federal Council for Science and Technology, current problems in management of scientific personnel	8450
fuel management	1776
hydraulic-engineering problems of Rumanian Black Sea littoral, Constanta	3859
international biomedical research, 1st National Institutes of Health, proceedings	18815
lignite technology and use, proceedings, April-May 1963	20479
manpower utilization in Federal Government	17862

	Entry
Symposiums—Continued	
measurement of thermal radiation properties of solids	1450
metabolic control mechanisms in animal cells	13294
microstructure of ceramic materials, proceedings	11431
modification of electromagnetic scattering cross sections in resonant region	19189
muscle relaxants, use, USSR	10962
naval hydrodynamics	18851
nondestructive testing of wood	12453
physics of solar flares	20537
protactinium chemistry	8078
radiomotes, dynamic clinical studies, proceedings	15286
range research methods	4212
reactor kinetics and control	13714
rotating and static precision components, proceedings	15009
Soviet economy crises	12274
USSR, eleutherooccus and glaseng	2560
Synchronization of motor units and related model representations, USSR	11226
Synchro, rotating and static precision components symposium, proceedings	15009
Synchrotrons:	
proton, cooperative venture in science, model for future (remarks)	1783
radiation calculations for artificial radiation belt	7512
Synopsis of Government proposed procurement and sales contract awards	3339
Synoptic meteorology, see Meteorology.	
Synthesis and properties of germanium fluorophosphate	13119
Synthesis of certain new thioles and their acetyl derivatives	5267
Synthesis of polyamides containing 8-triazine rings	13370
Synthesis of simple shock isolator	13149
Synthesis of 2,5-disubstituted quinolines, USSR	5334
Synthesis of unity-gain complex-zero RC networks	11495
Synthetic detergents, see Cleaning compounds.	
Synthetic fibers, see Fibers.	
Synthetic organic chemicals, see Organic compounds.	
Synthetic poisons, chemistry, effects and military significance, East Germany	8055
Synthetic rubber, see Rubber.	
Synthetic woven goods, see Textiles.	
Syphilis:	
and other treponematoses, world forum, September 4-8, 1962, proceedings	11567
serologic tests, 1964 manual	13419
Syria:	
Arab Republic, agricultural commodities, agreement	7784
Communist Party, Central Committee, statement	16470
economy, basic data	6858
labor conditions	11294
sailing directions	7632
System for measuring Seebeck coefficient and resistivity	20711
Systematic analysis of silicates	10653
Systems:	
complex, problems in cybernetics, USSR studies	11015
electric, design for naval aircraft and missiles, technical manual	11497
logic of, introduction to formal theory of structure	7989
see also names or types of systems, e.g. Signal systems.	

# INDEX 1964

	Entry		Entry
Systems Research and Development Service, FAA, technical reports, abstracts, general distribution, supplement	15132	Talc: minerals yearbook chapter	18709
Szanto, J., 1-year tropical exposure test of wood and plastic stocks for rifle	11527	Talent resources and responsibility for education of gifted and talented, conference report	4651
Szepesi, Zoltan, solid state image intensifiers	7647	Talent Development Project: goals and activities, 1964	6582
<b>T</b>			
T-37C category 2 performance test	4234	Talent fees, definition under fair labor standards act	16918
T-39A, <i>see</i> Airplanes.		Tallaferro, W. C., institutional wholesale grocery warehousing	7928
T rails, <i>see</i> Rails.		Talley, Thomas M., relief	12175
T.V.A., <i>see</i> Tennessee Valley Authority.			17239
Tabanidae, <i>see</i> Flies.		Tallulah, La., cost of cotton insect control with insecticides	13565
Table Rock Dam and Reservoir project:		Tamarisk, deciduous, introduction, notes	12469
buildings for public park and recreational use, extend time for construction		Tame, Kenneth E.: alkaline leach processing of sub-grade calcareous uranium ore	9525
hearing	21211	radioactivity in alkaline leach mill-processes	5492
law	21134	Tamper-proof rain gages	6749
reports	17723	Tanaka, Frank H.: category 2 stability and control tests of HH-43B helicopter	13612
Tablecloths, and related products, deceptive advertising and labeling as to size, FTC trade regulations rule	15910	HH-43B helicopter performance evaluation	1730
Tables (compilation), <i>see</i> technical, scientific and economic subjects.		Tanaka, Y., 600-A band of helium	13644
Tables (furniture): picnic table for children	8636	Taneypodinae, <i>see</i> Flies.	
Tables (mathematics), <i>see</i> Mathematics.		Tang, Pei Chin, inflight loss of consciousness, case report	4318
Tableware, radioactive dishes, health hazards	18901	Tanganyika: agricultural economy	17910
Tabor, Claude E., Jr., relief	21182	do business in, trade mission report	6861
TACAN, <i>see</i> Air navigation.		investment guaranties, agreement, technical cooperation, agreement	3160
Tachometers, generators, rotating and static precision components symposium, proceedings	15009	Tangler, Morocco, Consulate General office building and residence, construction, GAO review	10614
Tackle, David, regenerating lodgepole pine in central Montana following clear cutting	18062	Tankage, production, semiannual report	18989
Tacoma, Wash., principal electric facilities, map	676	Tankers: midship bending moments	7727
Taconic Mountains, stratigraphic names, definitions and synonyms	8759	rules and regulations	11962
Tactics, <i>see</i> Military art and science.		Tanks: farm milk, examination, NBS handbook	14933
Tactile sensitivity, nature of dermatological sense in man	5382	milk cooling, on farms supplying Federal milk order markets	13559
Tadpoles, <i>see</i> Frogs.		rectangular, variation of pitch motion of vehicle in space environment due to fuel sloshing	14869
Tadzhik Soviet Socialist Republic: Academy of Sciences, discusses future plans	2717	right-circular cylindrical, damping of liquids, errata	3005
grain production, reserves for increasing, USSR study	10882	spherical, liquid sloshing, viscous damping	1459
Taft-Hartley act, <i>see</i> Industrial relations.		<i>see also</i> Septic tanks.	
Tai Ung Chol, relief	15436, 17227	Tanks (military science): M60, excessive charges by components under contracts with Chrysler Corp., GAO report	4757
Tail (aircraft): sweptback 1-tail of cargo airplane, flutter studies	9583	Tannenbaum, Harold E., evaluation in elementary school science	15843
Tailings (ore dressing): iron, from Champion mine, Marquette Range, Mich., flotation treatment	20508	Tantalum: alloys	48
Tailoring, woman's suit, how to tailor	19074	oxidation resistant coatings	7461
Taiwan, <i>see</i> Formosa.		suitable for use at high temperatures	18703
Take-off (aircraft): H-21B sideward takeoff test	7970	hafnium-tantalum equilibrium diagram	18662
KC-135A heavy weight 3 engine performance test	4232	minerals yearbook chapter	16634
performance of representative supersonic transport configurations	14855	trace quantities in columbium, X-ray spectrographic analysis	17066
Talas-Fergana fault, Lower Carboniferous deposits, USSR study	5166	Tape, Gerald F.: paper, Aug. 31, 1964	11870
		remarks, June 16, 1964	
		Tape, system, low cost, measures velocity or acceleration	14808
		<i>see also</i> Adhesive tape.	

Entry

18709	Tape (magnetic), <i>see</i> Magnetic tape.	
10632	Tape recorders:	
	digital, analyzer-----	21748
4651	endless-loop tape transport for	
	satellite applications-----	13238
6582	satellite, vibration isolation-----	7492
21273	Tapeworms:	
	pollution of surface waters by eggs	
	of Echinococcus, determining-----	19147
16918	studies on echinococcosis in Soviet	
	Union-----	18338
7928	Taps and dies, forging dies, electro-	
12175,	slag build-up, USSR study-----	11143
21185	Tar roofing, <i>see</i> Roofing.	
13565	Tar sand, <i>see</i> Bituminous sand.	
12469	Tar siding, <i>see</i> Siding.	
	Taras, Michael A., increment core	
	sampling methods for estimat-	
	ing tree specific gravity-----	8692
	Tarasov, Vladislav S., testimony,	
	hearing-----	2125
9525	Target practice, national trophy	
	matches, 1963-----	1760
5492	Targets, Air Force, detection, visual	
6749	display enhancement and	
	techniques of color filtering,	
	study-----	9980
13612	Tariff:	
	act of 1930, amend-----	
1730	laws-----	13881
13644	reports-----	13886-887, 13891, 13910, 17341
	8309, 8311-13, 8315, 10266,	
4318	12231, 12233-235, 12243, 14098,	
	15544, 21194.	
17910	communications carriers, FCC rules	
	and regulations-----	3995
6861	customs duties, code of Federal	
3160	regulations-----	6653
11643	customs hints for returning U.S.	
	residents-----	4596
	customs regulations-----	3397, 19612
	revised pages-----	6535, 10442, 14159
10614	decisions under customs laws-----	4094
	Customs Court-----	8460, 21246
9, 20847	exemption for purchases made in	
	Virgin Islands, continue,	
	report-----	8287
7727	publications, price list-----	18887
11962	schedules-----	4073
	annotated-----	4074
14933	supplements-----	3168,
	13490, 16889,	
13559	by part by item, 1961-----	18993
	promulgated, 88th Congress, 1st	
	session-----	1823
14869	technical amendments act of	
	1964, reports-----	8579
3005	Yugoslavia and Poland, most-	
	favored-nation treatment, U.S.	
1459	interest-----	19578
	<i>see also</i> names or classes of articles	
	imported or exported.	
	Tariff Commission:	
	appropriations, 1964-----	13482
	hearings-----	515
4757	law-----	1974
15843	report-----	511
	appropriations, 1965-----	
	hearings-----	10288, 15791
48	law-----	17386
	reports-----	10245, 21193, 21233
7461	import data in terms of TSUS	
	classifications-----	1823
18703	investigation, beef and beef	
18662	products-----	15133
16634	investigations under escape clause	
	of trade agreements-----	5718
17066	notices, of hearings, investigations,	
11870	etc-----	4072
14808	public information releases-----	3926
	report, 1963-----	
	departmental edition-----	7809
	document edition-----	6224

Entry

Tariffs and trade, general agreement	
on, <i>see</i> General agreement on	
tariffs and trade.	
Tartaron, Francis X., prerefining pig	
iron with vortex cone-----	9506
Tashkent, Uzbek SSR, conference on	
peaceful uses of atomic energy,	
proceedings-----	17057, 19225
Task analysis:	
development of method, and theory	
of training-----	18853
guidelines-----	18854
methods, literature review-----	18855
Tasmania, lights and fog signals, list,	
changes-----	3074, 13311, 18845
Tate, Jasper E., relief-----	10201, 15626, 17183
Tavenor, A. S., emergency repair kit	
for large diameter tubeless	
tires and rolling transporters-----	5722
Tax Court:	
appropriations, 1965-----	
hearings-----	6341, 12251
law-----	17251
reports-----	8297, 14048
decisions (separates)-----	4075
reports (decisions)-----	
bound volumes-----	1628, 7810, 21897
consolidated pamphlets-----	4076
rules of practice, 1964-----	3169
Tax exemption:	
abuse by subversive labor organi-	
zations-----	
hearings-----	15811
report-----	17883
foundations and charitable trusts,	
their impact on economy-----	8402
print additional copies, re-	
ports-----	368-369, 2201-2
print hearings, report-----	19482
House of Representatives majority	
and minority rooms from Dis-	
trict of Columbia sales and use	
taxes, report-----	17618
Laborers' Pension Fund of Hudson	
County, N.J., as qualified	
trust-----	2007
nonprofit corporations, mutual	
deposit guarantee funds,	
hearing-----	15805
nurses' professional registries,	
status, report-----	13962
United Brotherhood of Carpenters	
and Joiners of America local	
union 746, as qualified trust-----	2004
United Supreme Council, Scottish	
Rite Freemasonry, from Dis-	
trict of Columbia tax-----	15450,
	15671, 17209
Woodrow Wilson House, from D.C.	
tax-----	
law-----	17329
reports-----	17507, 17709
Tax experts, internal revenue agent,	
specialist-----	850
Tax guide for U.S. citizens abroad-----	859
Tax refunds:	
exportation of imported distilled	
spirits, wines and beer-----	
law-----	17398
reports-----	8317, 15702
farmer's gas-----	19819
Federal gas tax refund-----	
aerial applicators, report-----	10213
nonhighway and transit users-----	849,
	18165
internal revenue taxes, refunds and	
credits, report-----	21168
Taxation:	
career opportunities, IRS-----	
estate tax examiner-----	4834
revenue agent, professional ac-	
counting-----	4840
revenue officer-----	4841
special agent-----	4842
tax technician-----	4844



# INDEX 1964

	Entry		Entry
<b>Taxation—Continued</b>		<b>Taxation—Continued</b>	
careers in tax work.....	2445	U.S. system and international tax relationships, perspective in 1964 (remarks).....	20863
common carrier property, tax assessments, hearing.....	21208	women, Social Insurance and Taxes Committee, report.....	1545
double—		see also Corporations—Employment taxes—Excise taxes—Income tax—Inheritance and transfer tax—Internal revenue—Sales tax—Tax exemption—Tax refunds—Use tax—also names of articles, etc., subject to tax.	
convention with Japan, protocol, ratification, report.....	15615	<b>Taxonomy:</b>	
convention with Luxembourg, ratification, report.....	15615	botanical, biometrical method, USSR study.....	16031
convention with Netherlands, extension to Netherlands Antilles.....	6377	fish, role of otoliths in analysis, USSR study.....	4979
ratification, report.....	15615	revision of genus <i>Theobroma</i> , cacao and allies.....	16759
convention with Sweden.....	6378	<b>Taylor, Genevieve K.:</b>	
ratification, report.....	15615	dining areas.....	16960
convention with United Kingdom, application to Southern Rhodesia, etc.....	7788	laundry areas.....	16961
protocol with Greece.....	10360	<b>Taylor, Alfred R.,</b> geology of Rewey and Mifflin quadrangles, Wis.....	18102
report.....	14030	<b>Taylor, G. C., jr.:</b>	
relief on earnings from operation of ships and aircraft, agreement with Mexico.....	20834	artesian water in Malabar coastal plain of southern Kerala, India.....	12518
employer's tax guide.....	6837	ground water in folded Cretaceous sandstone of Bhachau area, Kutch, India, etc.....	815
Federal system, facts and problems, 1964.....	17442	<b>Taylor, Hobart, jr.:</b>	
guide for U.S. citizens abroad.....	859	remarks, etc.—	
Intergovernmental relations, results of questionnaire.....	2238	Nov. 7, 1963.....	1543
Internal Revenue Service publications containing tax information, list.....	1549	Dec. 5, 1963.....	3089
life insurance companies, correct certain inequities—		Jan. 31, 1964.....	5637
law.....	17429	Apr. 24, 1964.....	13380
reports.....	12047, 17615, 17748	May 17, 1964.....	13377
limit buyer dinner (remarks).....	21913	June 10, 1964.....	15034
limiting priority and nondischargeability in bankruptcy, report.....	14080	July 10, 1964.....	15035
President's 1963 tax message, see, in main alphabet, Income tax.		July 23, 1964.....	16820
property, role of States in strengthening.....	1A	<b>Taylor, James L.,</b> space and facilities for art instruction.....	4645
publications, price list.....	18887	<b>Taylor, Joanne I.,</b> relief.....	15648, 19379
quarterly tax reports.....	1824, 19307	<b>Taylor, John G.,</b> brooding chicks with infrared lamps.....	9945
schools, nonproperty, possibilities for local application.....	589	<b>Taylor, John H.,</b> relief.....	17502
small business, 1964, guide.....	858	<b>Taylor, Leland R.,</b> testimony, hearings.....	6526
States—		<b>Taylor, Maynard F.,</b> heat transfer and friction data for hydrogen and helium at surface temperatures up to 5600° R.....	11407
and local governments revenue.....	1824, 8138, 13772, 19307	<b>Taylor, Reuben E.,</b> X-15 power unit pinion gear wear and failure problem.....	20947
collections, 1963.....	191	<b>Taylor, William C.,</b> testimony hearings.....	6526
collections, 1964.....	21036	<b>Taylor, David, Model Basin,</b> see David Taylor Model Basin.	
employees in interstate commerce, exempt nonresidents from withholding tax—		<b>Taylor grazing act,</b> see Grazing.	
hearing.....	10413	<b>Tazewell County, Va.,</b> coal, carbonizing properties.....	5496
report.....	12225	<b>TDP, see</b> Talent Development Project.	
interstate commerce activities, investigation—		<b>Tea, foreign agriculture circulars.</b>	3520
expenses, report.....	12070	<b>Teachers:</b>	
extend time for filing reports, law.....	8225	and professors, grants for study, research and summer seminars abroad in modern foreign languages, 1964-65.....	4622
extend time for filing reports, reports.....	6296, 6486	beginning, one year later, report of followup study.....	14177
report.....	13928	characteristics, census, 1960, announcement and order form.....	15301
report, print additional copies, report.....	17822	District of Columbia—	
tax cut and expansion of consumer demand (text).....	19365	educational leave, increase partial pay—	
tax overlapping in U.S., 1964.....	16930	law.....	17381
tax reduction as balanced stimulus for expansion (remarks).....	1638	report.....	17714
tax treatment of U.S. concerns with Puerto Rican affiliates, hearings.....	17892	salaries, increase—	
taxable property values, census of governments, 1962, errata.....	19285	law.....	17433
taxes paid by firms marketing farm food products.....	6554	reports.....	15568, 17618, 17716
taxes, poverty, jobs, and profits (speech).....	11829		
Treasury tax and loan account balances, list of banks holding.....	10299		

# JANUARY-DECEMBER

Entry

0863

1545

6031

4979

6759

6960

6961

8102

12518

815

1543

3089

5637

13380

13377

15034

15035

16820

4645

15648

19379

9945

17502

6526

11407

20947

6526

5496

3520

4622

14177

15301

17331

17714

17435

17716

## Teachers—Continued

District of Columbia—Continued  
temporary, health and life insurance  
benefits, extend—

hearing ..... 6522  
law ..... 21123  
reports ..... 17794, 19461  
education program in electronic  
data processing ..... 8490  
elementary and secondary schools,  
fall 1963, statistics ..... 15844  
elementary, secondary, college and  
university, employment out-  
look ..... 9411

English teaching forum—  
articles of interest to teachers  
of English as foreign language ..... 20865  
facts and ideas for teaching  
English as foreign language ..... 5733-34, 13503, 19010

exchange opportunities, summer  
seminars, teaching and re-  
search, 1965-66 ..... 15859  
inservice mathematics education,  
promising practices for elemen-  
tary and secondary school  
teachers ..... 19630

institutes for advanced study for  
English, reading, etc., prepar-  
ing proposals, manual ..... 21267  
Maine, social security coverage law,  
negotiate with their school boards ..... 13898, 19642

preparation, 5 targets for next 10  
years ..... 8496  
social and economic characteristics,  
census of population, 1960 ..... 11915

Spanish opportunities abroad,  
1965-66 ..... 17919

teaching opportunities, directory of  
placement information, 1964 ..... 12328

trainers of trade and industrial edu-  
cation, directory ..... 4618

Teachers College, District of Colum-  
bia, see District of Columbia  
Teachers College.

Teachers' Day, see National Teachers'  
Day.

Teaching:  
about United Nations in United  
States, 1960-63, report ..... 14199

aerospace education handbook for  
elementary teachers ..... 7569

automated procedures for retarded  
children ..... 12321

Bulgaria, modern devices ..... 21605  
conservation, in our forests are  
many mansions ..... 2356

cybernetics, role in classroom,  
USSR studies ..... 7004

methods, algorithmical approach to  
analysis is valid, USSR study ..... 1329

modeling processes in automatic sys-  
tems, USSR study ..... 1024

Navy instructors' manual ..... 11484  
opportunities, directory of place-  
ment information, 1964 ..... 12328

programmed, developments in  
USSR ..... 2828

public welfare staff training pro-  
ject ..... 7851

Soviet research on teaching during  
sleep ..... 18198

teachers electronic data processing,  
plan ..... 8490

teaching Federal income taxes pro-  
gram—  
farm ..... 2450  
general ..... 2451-52  
see also Programmed Instruction—  
also subjects taught.

Teaching machines:  
Armed Forces, Navy, party doctrine,  
USSR— translations ..... 7153  
cybernetic, use, Bulgarian study ..... 18196  
in Soviet school, USSR study ..... 11130

Entry

Entry

## Teaching machines—Continued

programmed instruction and cyber-  
netic teaching machines ..... 12890  
scientific conferences on automatic  
teaching, USSR ..... 14627

Soviet bloc, literature survey, 1962-  
63 ..... 7056  
step size and error rate ..... 20704

use in programmed instruction,  
evaluation, USSR study ..... 10985  
use of culling in training tasks ..... 18323

USSR discussion ..... 7161

Teamsters Union, see International  
Brotherhood of Teamsters,  
Chauffeurs, Warehousemen,  
and Helpers of America.

Teamwork, TVA and Tennessee Val-  
ley Trades and Labor Council ..... 4077

Tebben, Gerald D.:  
coefficients of friction, etc., of  
cermet material for X-20A  
nose gear skid ..... 5877

friction and wear property of wire  
brush skids constructed with  
Rend 41 bristles ..... 19134

Tebow, Hilda P., desarrollo del per-  
sonal como una parte inte-  
grante de la administracion ..... 8525

Technical assistance, see Foreign aid.  
Technical assistance aid (series) ..... 16577, 18611

Technical bulletins:  
Agriculture Department ..... 42-44,  
1722-23, 5862-64, 7950-53,  
15223-224, 16973-974, 19103-  
105.

Coast and Geodetic Survey ..... 4407  
Technical Committee on Plumbing  
Standards, report ..... 9725

Technical cooperation, see Foreign  
aid—also name of country  
with which agreement is made.

Technical cybernetics, USSR ..... 14510, 19865  
Technical data:  
Air Force maintenance system  
study ..... 51

exportation ..... 8810  
Technical data package, erroneous  
purchase from Westinghouse  
Electric Corporation by Navy  
Dept., GAO report ..... 4756

Technical documentary reports:  
Aeronautical Systems Division ..... 46-50,  
4223-28, 5867-69, 7955-59,  
11783.

Aerospace Medical Research Labo-  
ratories ..... 51, 9967, 11784-785

Air Force Flight Test Center ..... 1728-32,  
4232-34, 5877-84, 7963-71,  
9974-75, 11786-787, 13612-623,  
15227, 16987-988, 19134-135,  
20947-948.

Arctic Aeronautical Laboratory ..... 4242-50,  
7980-83, 9976-79, 19140-148,  
20955-956.

Arnold Engineering Development  
Center ..... 4253, 7988

Electronic Systems Division ..... 63-64,  
1736, 5890-91, 7989, 9980-81,  
11798, 16994, 20957

Personnel Research Laboratory ..... 4256,  
7993-94, 9983-85, 11802-803,  
13633-635, 15232-235, 17002,  
19161-164, 20970-971.

Research and Technology Divi-  
sion ..... 5893-94, 11804

Rome Air Development Center ..... 4257,  
7996, 20972

School of Aerospace Medicine ..... 70-79,  
1742-49, 4259-60, 5895-5911,  
7999-8006, 9986-88, 11806-808,  
13647-651, 15236-242, 17009-  
15, 19177-186, 20973.

Space Documentary Division ..... 11809

# INDEX 1964

Entry	Entry
Technical education: programs, electronic data processing in engineering, science, and business, suggested techniques for determining courses of study-----	8481
State supervisors, directory-----	4617
teacher trainers of trade, etc., education directory-----	4618
technical education program series, years of education as predictor of training success-----	21263
Technical information bulletins, Atomic Energy Commission-----	4304-6, 8090
Technical Information Division, cataloging reports, report number series used by Technical Information Division-----	17059
Technical information handbook, Air Force Flight Test Center-----	7972
Technical information release-----	14368
Technical journals, Soviet bloc and China, selected articles, English abstracts-----	3439-45
Technical literature searching service-----	20853
Technical manuals: Army Department-----	109, 1765, 4288-90, 8038-43, 10012-15, 11847-849, 13680-684, 15272, 17051-53, 19215-222, 21003-5
Marine Corps-----	5460
Navy calibration program-----	1530
5623, 11497-525, 13355-366, 16802-804.	
see also names of departments, etc., issuing technical manuals.	
Technical memorandums: Coastal Engineering Research Center-----	6587, 12339-342
Feltman Research Laboratories-----	13369-370
National Aeronautics and Space Administration-----	5504-6, 7492, 9564, 14833-834, 20566
National Meteorological Center-----	11691
Waterways Experiment Station-----	641, 14211
Technical news bulletin, National Bureau of Standards-----	4078
Technical notes: Arctic Aeromedical Laboratory-----	4251-52, 7984-87
National Aeronautics and Space Administration-----	1452-79, 3005-34, 5507-22, 7493-7552, 9565-9612, 11378-417, 13211-246, 14835-899, 16677-721, 18730-791, 20567-617, 21746-776
National Bureau of Standards-----	1498-99, 3047-53, 5549-50, 7580-82, 9635-39, 11436-441, 13274-277, 14939-942, 16740-742, 18806-811, 20641-643, 21783-787
Technical papers: Census Bureau-----	1825
Weather Bureau-----	19027, 21922
Technical publications, Civil Aeromedical Research Institute-----	139
Technical publications announcements, contract number index, cumulation, NASA-----	9541
Technical record of design and construction, Steinkjer Dam-----	3120
Technical reports: Aeronautical Systems Division-----	4227, 5870
Army Engineer Research and Development Laboratories-----	10482, 14201
Technical reports—Continued	
Army Transportation Research Command-----	1636, 3172-74, 5722-26, 7815-19, 9857-58, 11666-667, 15136-138, 16893-896, 18999-19001, 20854-859, 21905-911
author's guide for technical reporting-----	19160
Civil Defense Office-----	4372-73, 15344-346, 21048
clarity in technical reporting-----	16667
Cold Regions Research and Engineering Laboratory-----	6588, 8511-16, 10487, 15866, 17938-941, 19652
Harry Diamond Laboratories-----	5628, 7663-64, 13371
highway planning-----	5670
National Aeronautics and Space Administration-----	1482-86, 5523-29, 7553-62, 9613-20, 11418-421, 13247-258, 14900-905, 16722-726, 18792-795, 20618-621, 21777
National Capital Open-Space Project-----	7583
Naval Ordnance Laboratory, White Oak, Md-----	5620, 13349
Naval Research Office-----	13347
RLT series-----	7655
Naval Training Device Center-----	1528, 3083, 5586, 7646-48, 11489-494, 13322-323, 15002-6, 16797-798, 18852-856, 20701-707, 21825-828
news letter-----	4079
Ohio River Division Laboratories-----	4670, 12352, 14207-208, 17950
Rock Island Arsenal Laboratory-----	18869
Rome Air Development Center-----	69
Springfield Armory-----	11527
Systems Research and Development Service, FAA, abstracts, general distribution, supplement-----	15132
Watervliet Arsenal-----	7665
Waterways Experiment Station-----	642-643, 2300-1, 4671, 6598-6601, 8520, 14212-214, 15878, 19662-19665, 21282-284
Wright Air Development Division-----	1750, 5918, 13652
Technical reprint NASA RP series-----	1487
Technical research notes: Army Personnel Research Office-----	13685, 15274-276, 21006-7
abstracts, 1964-----	21007
Technical research reports: Army Personnel Research Office-----	13687, 15277, 21008
abstracts, 1964-----	21007
Technical Sciences Department, Academy of Sciences, USSR technical cybernetics, news-----	4962, 8847
Technical Services Office: OTS selective bibliography SB series-----	149, 1793-1800, 9849-53, 11658-664, 13491
list-----	7812
press releases-----	3910
technical information center for science and industry-----	20852
technical literature searching service-----	20853
Technical standard order-----	4684
Technical studies, Federal Housing Administration, lists-----	658, 6637
Technical translations: bibliography, OTS periodical-----	4080
periodicals translated in, basic list-----	4325, 18997

Entry	Entry
	Technical translations—Continued
1636,	National Aeronautics and Space
15-19,	Administration ----- 1480.
5-138,	3035-40, 5530-34, 7563-68,
0854-	9621-27, 11422-424, 13259-263,
	14906-926, 16726-733, 18796-
	798, 20622-630, 21778-780.
19160	Technicians:
72-73,	employment in State government
21048	agencies, 1962 ----- 14705
16667	engineering and science techni-
6588,	cians, employment outlook ----- 9412
7938-	labor market conditions, semian-
	nal study ----- 4657, 19647
5628,	laboratory and clinical in health
13371	research, examination an-
5670	nouncement ----- 4394
	requirements and supply in 1960's.
82-86,	scientific and technical personnel
13-20,	in industry -----
4900-	1961 ----- 9665
2-795,	1962 ----- 16613
7583	see also Electronic technicians—
13349	Fire control technicians—
13347	Medical technicians.
7655	Technique simulates effect of re-
1528,	duced gravity ----- 14832
9-494,	Technological unemployment, dis-
7-795,	placed workers, case studies
21825-	experiences after layoff ----- 16610
4079	Technologists:
4670,	career opportunities, atomic en-
17950	ergy ----- 137
18869	cotton, examination announcement,
69	discontinuance notice ----- 4386
11527	see also Medical technologists.
15132	Technology:
7665	adjustment of individual to
2-643,	changes (address) ----- 11964
8520,	aerospace, Conference on New
19665,	Technology, Lewis Research
	Center, general information. 21743
	application of living systems to
	technological problems, USSR
	study ----- 1121
	bibliography, PL-480 translation
	program ----- 11664
	changing, implication for training
	of people, (address) ----- 14677
	chemical, post high school curricu-
	lum ----- 21263
	Chinese mainland, bibliography ----- 1793
	Communist China, translations ----- 915,
	1088, 1209, 1231, 2605, 2751,
	2786, 2897, 4936, 4955, 5080,
	5246, 5279, 6942, 7079, 8866,
	8985, 9016, 9041, 9167, 10760,
	10844, 10888, 10970, 10992,
	11172, 11213, 12611, 12658,
	12700, 12715, 12819, 12973,
	13021, 14411, 14532, 14604,
	14608, 14624, 14644, 16015,
	16208, 16240, 16334, 16419,
	16497, 18204, 18406, 18431,
	18496, 18592, 19839, 19851,
	20112, 20158, 20179, 20273,
	20306, 21419, 21496, 21536,
	21566.
	computer—
	Soviet systems, development,
	etc ----- 10758
	use in statistical work, USSR
	study ----- 10753
	use to control national economy,
	USSR study ----- 16327
	development in United States
	(address) ----- 11298
	directories, provisional checklist. 5453

Entry	Entry
	Technology—Continued
	East European journals, abstracts. 904,
	948, 967-968, 977, 984, 1034,
	1044, 1063, 1084, 1087, 1099,
	1125, 1128-29, 1173-75, 1192,
	1216, 1218, 1261, 1291, 1308-9,
	1344-47, 1353, 2482-83, 2496,
	2523, 2631-33, 2666, 2687, 2690-
	91, 2700, 2726, 2741-42, 2762-
	64, 2780-81, 2789, 2803-5, 2840,
	2849, 2853, 2855.
	economic and social implications,
	current projects, 1963 ----- 14987
	employment of aliens—
	law ----- 17407
	reports ----- 17551, 17806
	exchange program, agreement with
	USSR ----- 15118
	future international meetings,
	world list ----- 4167
	health and safety aspects of automa-
	tion and technological
	change, abstracts ----- 7358
	History and Technology Museum,
	papers—
	index ----- 1509
	title page, etc. ----- 1510-11
	Industrial, Improving, Federal
	Government's role (remarks) ----- 10129
	investment casting, new develop-
	ments, USSR study ----- 20226
	Israel, development ----- 21495
	Israeli personalities ----- 2884
	Japanese, bibliography ----- 1796
	man and technology, USSR study ----- 1230
	metallurgical shop develops new
	technology, USSR ----- 20378
	methods of adjusting to automa-
	tion and technological change ----- 20734
	mining review, minerals yearbook
	chapter ----- 13136
	NASA scientific and technical pub-
	lications and how to obtain
	them ----- 18726
	NASA technical reports for 1963,
	selected listing ----- 11365
	National Referral Center for Sci-
	ence and Technology, general
	information ----- 13094
	Naval Guided Missiles School, spe-
	cial course—
	student training manual and
	textbook ----- 13320
	training manual ----- 16792-793
	new, impact on people (remarks) ----- 21065
	oil shale, review ----- 14737
	physiological basis for new forms
	of labor under conditions of
	technical progress, USSR
	study ----- 12938
	productivity and technological
	trends in private economy,
	1947-62 (statement) ----- 1387
	role and effect in Nation's economy,
	hearings ----- 19608
	science and technology, SF-(se-
	ries) ----- 4009
	scientific and technical information
	in Federal government, status
	report ----- 8541
	technical information interchange,
	Germany ----- 18965
	technical research, statistical char-
	acterization, new aspects,
	Rumanian study ----- 11009
	technological change and recent
	collective bargaining ----- 13046
	technological change, pace, and
	factors affecting it (paper) ----- 20428
	technology and man, outlines in
	engineering psychology, USSR
	study ----- 2668
	technology and national needs
	(talk) ----- 8190



# INDEX 1964

	Entry		Entry
Technology—Continued		Telecommunication—Continued	
technology utilization report.....	5503	USSR, new books.....	21573
trends in 36 major American industries, study.....	11299	<i>see also</i> special method of communication.	
USSR—		Telegraph:	
Lenin prizes, attainments, 1964.....	11228	data from carriers' monthly reports.....	3817
planning development of new technology.....	901	domestic record communications industry, review of 1963, outlook for 1964.....	4332
studies.....	16442	franks, FCC rules and regulations, wire, classification of employees, FCC rules and regulations.....	3995
utilization notes.....	7479	Telemetering systems, <i>see</i> Radiological telemetering systems.	
utilization program of NASA for industrial and consumer benefit.....	1488	Telemetry:	
utilization publications, list.....	14929	miniature system, development.....	5899
why industrial arts?.....	4652	PCM data processing and display test stand for Explorer XVII.....	13239
world isotope and radiation, literature survey.....	116	probe entering atmosphere of Mars, pulse frequency modulation (PFM), encoders design.....	13211
<i>see also</i> Automation.— <i>also</i> subjects.		pulse-frequency-modulation telemetry system, for Alouette topside sounder satellite.....	21783
Technology, Automation, and Economic Progress, National Commission on, <i>see</i> National Commission on Technology, Automation, and Economic Progress.		systems—	
Tedrick, Richard N., atmospheric acoustics as factor in Saturn static testing.....	18735	application of integrated circuits medium-data-rate digital.....	14838
Tee rails, <i>see</i> Rails.		medium resolution infrared-pulse code modulation, example of microelectronic logic design.....	14859
Teenagers, <i>see</i> Youth.		UHF concept study.....	14856
Teeth:		Telephone:	
care, and prevention of dental disease.....	21682	commercial communications services, Air Force manual.....	5886
caries—		commercial long-distance calls, unnecessary costs to Government made by civil agencies between cities served by Federal Telecommunications System, GAO report.....	8739
experience and periodontal status, oral glucose tolerance responses.....	4260	companies—	
prevention by stannous fluoride topically applied in aqueous solution.....	13649	class A and class B, classification and compensation of employees, FCC rules and regulations, consolidation, acquisition, or control applications, FCC rules and regulations.....	3995
reductase activity of human whole saliva as related to dental experience.....	11808	uniform system of accounts, FCC rules and regulations.....	3994
statistical considerations for clinical studies.....	15241	current industrial reports.....	3391
dental calculus, apparatus for removal with ultrasound, USSR study.....	1252	data from carriers' monthly reports.....	3818
enamel surface protection by tap-water solutions of stannous fluoride.....	8002	directories—	
fasting and postprandial serum glucose levels as related to periodontal status and caries experience.....	19181	Atomic Energy Commission.....	19268
horizontal mobility in screened subjects.....	8005	Commerce Department.....	6125
serum proteins in relation to periodontal status and caries experience.....	1747	National Aeronautics and Space Administration.....	7467
Teflon, <i>see</i> Polytetrafluoroethylene.		Senate.....	8405
Teichner, Warren H.:		franks, FCC rules and regulations, occupations, employment outlook, rural—	3995
information processing under task stress.....	5891	audit of REA borrowers' accounting records.....	3122
visual after-images as source of information.....	16797	construction contract, labor and materials.....	13435
Tektites:		program, statistical report—	
Australian, application of theory of tumbling bodies entering planetary atmospheres.....	14905	1962.....	3121
melts, vapor pressure and vapor fractionation.....	20570	1963.....	18931
Telecasting, fairness doctrine applied to editorializing in broadcasts (address).....	15887	Rural Electrification Administration borrowers systems, list of materials acceptable.....	11596
Telecommunication:		supplement.....	3683
agreement with Colombia.....	7777	statistical bulletin.....	3749
code of Federal regulations.....	8560-62, 10534	tolls and charges, reimbursement of census enumerators, authorize—	
electrical communication, short history.....	12386	hearing.....	10335
Federal system operations, efficiency and economy, hearings.....	12133	law.....	17394
market for U.S. equipment in Brazil.....	4337	reports.....	10261, 17791
Poland, public equipment, development to 1980.....	2681	USSR, rural networks, planning.....	20367
		<i>see also</i> Radio telephone.	
		Telephone lines, extension, etc., FCC rules and regulations.....	3995

# JANUARY-DECEMBER

	Entry		Entry
Telescopes, electron, results of observations, USSR study-----	7346	Television picture tubes, see Television.	
Teletype:		Telex service statistics, Poland-----	13012
duplicate automatic switching centers in military services, excessive costs, GAO report-----	8719	Telluric bays and disturbances, USSR-----	9323
equipment leasing by Defense Dept., unnecessary costs, GAO review-----	12495	Telluric currents, see Geophysics.	
leasing rather than purchasing equipment, FSS, GAO report-----	21334	Tellurium:	
RTA-60 page teletype, USSR study-----	9110	oilfield waters, analyzing method-----	14756
telex service statistics, Polish study-----	13012	resources in Arizona, Colorado, New Mexico, and Utah-----	5493
Typewriter, see Teletype.		Telodrin, persistence on sweet corn as determined by gas chromatography-----	13564
Television:		Temperament, psychological characteristics, experiment, USSR-----	2773
broadcast actions, reports-----	3464	Temperature:	
broadcasting, occupations, employment outlook-----	7396	activity of <i>Musca domestica</i> , USSR study-----	2641
closed circuit displays for manual blind landing, flight study of performance-----	13226	air, water, and stream flow data, Convict Creek, Calif-----	10577
closed-circuit, for aircraft landing-----	7543	atmospheric-----	
closed loop system, mark 2 mod 2, description, operation and maintenance-----	13350	falling sphere measurements-----	16998
cloud photography-----		measurement by rocket-grenade experiment-----	7516
TIROS V, meteorological satellite data, catalogue-----	9882	automatic controls industry, review of 1963, outlook for 1964-----	6006
TIROS VI, meteorological satellite data, catalogue-----	19026	axial, and pressure distribution in EGCR development of PTD-1 program-----	11857
commercial and educational television co-exist (address)-----	6623	bath, in electroslag process, calorimetric determination, USSR study-----	2754
divided or united, some problems in growth (address)-----	14233	bend transition, of arc-cast molybdenum and titanium alloy sheet-----	20583
editorializing, hearings-----	6363	change, detuning of cavity amplifiers, nylon sleeve design-----	13166
education by television (address)-----	2308	combustion in supersonic streams, optical techniques for measurement-----	18769
educational facilities program-----	10663	cryogenics, elastomers evaluation for potential use-----	15017
program bulletin-----	10664	distribution and thermal stresses, distribution in crystallization of undercooled liquids in cylindrical tubes-----	13436
educational television and money (address)-----	21295	effects on-----	
emergency broadcast system (EBS) plan-----	8153	corn earworm damage to dent corn-----	20896
employees, exemption from overtime pay under FLSA-----	3187	noise of bypass jets, measured in Langley noise research facility-----	16695
equal time for nominees for President and Vice President, suspend for 1964, report-----	12050	surface failure of alumina balls due to repeated stresses applied in rolling contact-----	13227
fairness doctrine of FCC, current interpretation (address)-----	2309	EGCR and neutron transient analysis, digital computer program-----	15280
households with sets in U.S., current housing reports-----	17086	gray body most closely fitting solar extraterrestrial spectrum-----	18730
microscopy, in cytopathology-----	3114	ground observations-----	
operations and maintenance technicians, examination announcement-----	17147	Ble Delta, Alaska-----	17940
picture tubes, exemption of manufacturers' tax from taxable price of rebuilt tubes-----		Galena, Alaska-----	17938
law-----	21145	McGrath, Alaska-----	17939
report-----	15711	height variation of vertical heat flux near ground-----	20958
pictures, area properties-----	17006	high-----	
Poland, Warsaw Radio and Television Design Office, activities, ratings, methodology, accuracy, and use, hearings-----	12960	bearings, research-----	50
role of industry and FCC in regulation of advertising time standards for communications industry (address)-----	12142	carbon-graphite materials, techniques in investigation-----	21584
sets, current industrial reports-----	10514	conductivity of rocks, USSR study-----	903
tubes, radiation as health hazard-----	17094	corrosion studies-----	7439
USSR, selection of color system-----	18901	cortical regulation of water and electrolyte balance, USSR study-----	2891
utilization under national defense education act, news and reports-----	20373	effect on strength properties of reinforced plastic laminates-----	7955
visual data transmission-----	17928	feasibility of electrical precipitation-----	2993
world atlas of photography from Tiros satellites I to IV-----	13643	gases, partition functions and thermodynamic properties-----	7988
see also Television channels.	20525	magnesium alloys processing, USSR study-----	14410
Television channels, demodulation of wide-band frequency modulation by phase-lock technique-----	13212		

# INDEX 1964

	Entry		Entry
Temperature—Continued		Tennessee—Continued	
high—continued		ground-water geology of Dickson, Lawrenceburg, and Waverly areas of Highland Rim.....	19799
mechanical properties of commercial Ni-base resistant alloys, Japanese study.....	12876	industrial modernization, opportunities (address).....	19274
oxidation and nitridation of niobium in ultrahigh vacuum.....	8085	labor organizations, reporting, register.....	16571
strength of materials and structural elements conference, USSR.....	10786	large springs of eastern section—late Cretaceous gastropods (series).....	826
thermodynamics and thermophysics, USSR study.....	10763	mineral industry, minerals yearbook chapter.....	18125-126
thermo-physical properties investigation of substances, USSR study.....	18368	Mississippi River and tributaries, fishery products, wholesale dealers, list.....	1424
transference numbers in pure and mixed aqueous electrolytes.....	8799	municipal waste facilities, 1962 inventory.....	8616
ingot, problems, USSR study.....	5403	municipal water facilities.....	3104
ionospheric, obtained from photography of shock waves.....	20963	precipitation data, hourly.....	18909
linear variation, simple circuit provides adjustable voltage.....	9560	women, labor laws, summary.....	3578
low—		Tennessee River and Valley:	13546
effect on biological activeness of preparations made from stag antlers, USSR study.....	10968	basin, floods, Mar. 1963.....	9856
heat capacities of lead molybdate and lead tungstate.....	7437	floods, magnitude and frequency.....	4816
magnetization vs. temperature curves, calculation for ferrimagnetic materials.....	5595	precipitation in basin.....	3862
measurement of free atmosphere taking into account recombination of atoms.....	14922	surface water records of basin, Oct. 1950–Sept. 1960.....	15959
measurements, thermocouple materials, selection and properties, errata.....	11432	Tennessee Valley Authority:	
measurements with rocket grenade experiment, 1960–63.....	20621	annual report, 1963.....	3170
measuring set AN/TMQ-11(A), modification and testing.....	7961	appropriations, 1964—	
metals, in relation to deformation, USSR studies.....	20072	hearings.....	518
Pacific Northwest, monthly.....	3829	law.....	1984
room, olivine shear strength.....	19155	reports.....	343, 510, 4458
sky, apparent at millimeter-wave frequencies.....	19171	appropriations, 1965—	
spacecraft, control by thermostatic fine-analysis.....	18717	hearings.....	12119, 15796
structures, variable-transparency wall regulates temperatures.....	14811	law.....	17370
temperature-sensitive network drives astable multivibrator.....	20548	reports.....	12098, 15767, 17572
thermophysical physical properties of argon from 0 to 300° K, bibliography.....	14941	bridge relocation, etc., hearing.....	21211
transient, FATT computer program for EGCR core.....	11858	electricity sales statistics, retail distribution.....	3432
two-stage emitter follower is temperature stabilized.....	13193	facts about TVA operations, 1964.....	21898
upper-air, measurement.....	9533	financial statements, 1963.....	1631
variable, bioclimatic cabinet for simulating, design and operation.....	19051	audit—	
wood parts of houses throughout U.S. ....	6743	departmental edition.....	6761
see also Body temperature—Cold—Heat—Heat transfer.		document edition.....	10172
Templates, built-in speed up process for making accurate models.....	7489	fish and wildlife, valuable natural resources.....	5720
Tendons, lyophilized, homotransplantation in flexor digitorum profundus lesion at carpal articulation level.....	21445	Forestry Development Division, annual report, 1963.....	1630
Tennessee:		furniture industry expansion, history, 1933–63.....	5721
annual survey of manufactures, 1962, standard metropolitan areas and large industrial counties.....	6030	national fertilizer education program, statistical summary by States and geographic areas.....	1633
area measurement report.....	17075	power—	
barite-fluorspar ore, flotation tests.....	16641	municipal and cooperative distributors, 1963 operations.....	3171
climatological data.....	3329	1963–64.....	21902
electric rate book.....	4709	research and education programs, fertilizer science and American farmer.....	21899
		river traffic and industrial growth teamwork (periodical).....	21903
		tributary area development—activities, list of reports and publications.....	4077
		in Tennessee.....	1634
		TVA, national asset.....	21900
		TVA program, bibliography.....	21901
		valley of light, 1933–63.....	1629
		Tensile strength, see Strains and stresses.	21904
		Tension:	
		information processing under task stress.....	5891
		mechanism of change in function of thyroid gland during stress, USSR study.....	21398
		perception and short-term memory under work-load stress.....	20706
		stress and fatigue under conditions of isolation from external stimuli, USSR study.....	12918

# JANUARY-DECEMBER

Entry

19799

19274

16571

826

5-126

1424

8616

3104

18909

3578

13546

9856

4816

3862

15959

3170

518

1984

0, 4458

15796

17370

17572

21211

3432

21898

1631

6761

10172

5720

1630

5721

1633

13492

3171

21902

21899

21903

4077

1634

21900

21901

1629

21904

5891

21398

20706

12918

## Tension—Continued

stress, effect on radiosensitivity of rats and effectiveness of radio-protective action of mercamine, USSR study-----

see also Strains and stresses.

Tent caterpillars, see Eastern tent caterpillars—Forest tent caterpillars.

## Tents:

air-supported tentage, field manual-----

pole and frame supported, Army field manual-----

Terephthalate, see Polyethylene terephthalate.

Tereshkova, Valentina, flight, background, USSR study-----

Terkin versus Terkin, critique of A. Tvardovsky's new poem, USSR-----

Terlin, Rose, job horizons for college women in 1960's-----

Terminals (transportation):

air, evaluation of radar service area control concept-----

Air Force guide, Defense Supply Agency handbook-----

ammunition loading-----

army guide, Defense Supply Agency handbook-----

marine terminal leases, exempt from penalties-----

hearing-----

law-----

reports-----

terminal industry, and Federal Maritime Commission (remarks)-----

## Terrain:

investigation of roughness-----

muskeg, trafficability tests-----

rough, effect on landing loads, etc-----

Terrazzo, workers, employment outlook-----

Terrebonne Bayou:

declare portion nonnavigable waterway-----

law-----

report-----

Terrestrial magnetism:

anomalies in transition region from Asiatic Continent to Pacific Ocean, USSR study-----

directional dependence of counting rates from Explorer IV-----

earth satellite spin motions, effects of magnetically induced eddy-current torques-----

equatorial loci of earth's magnetic field and cosmic ray parameters-----

geomagnetic disturbances, USSR articles-----

infrasonic waves from auroral zone associated with-----

mineralization associated with magnetic anomaly in part of Ely quadrangle, Nev-----

mutually consistent magnetic charts based on orthogonal functions-----

rapid pulsations in earth's electromagnetic field, USSR study-----

satellites in circular orbits, magnetic field encountered-----

South Pole traverse, results of measurements, 1962-63-----

Soviet research-----

telluric bays and disturbances, USSR study-----

world magnetic survey, methods, results expected, etc-----

see also Magnetic surveys—Magnetograms.

Terrestrial substances, polarization of light, research study-----

Entry

14471

15265

19203

20376

1089

15175

4268

6542

14206

560, 6541

6499, 15596

6186

2206, 6274

661

15138

21283

7819

13056

17263

10219

969

18792

11389

11799

3036

13216

18122

20964

9359

7501

17148

895, 993

9323

7518

16727

Territories, health authorities, directory, 1964-----

Terry, James E.:

parametric study of hypersonic flow fields about blunt-nosed cylinder at zero angle of attack-----

vacuum adaptation of baseplate materials-----

Terry, Luther L.:

addresses-----

Nov. 11, 1963-----

Feb. 4, 1964-----

Tertiary period:

Foraminifera, stratigraphic and paleoecologic significance-----

mollusks, gastropods, Calumbellidae to Volutidae-----

reef-associated limestones-----

smaller Foraminifera of southern Okinawa-----

Test ban treaty, see Nuclear explosions.

Test stands, vibration analysis of AFTC VTOL test stand-----

Testicles, rats, gamma irradiation with Co<sup>60</sup>, histochemical characterization USSR study-----

Testimony, see Evidence.

Testing:

commitment to youth, progress under National Defense Education Act, 1958-63, report-----

education, develops stronger schools-----

materials, bibliography-----

National Bureau of Standards, test services-----

nondestructive, all-Union conference-----

untestables-----

see also names of substances or objects tested.

Testing apparatus:

cotton, equipment and techniques basis for interpreting reports, cotton testing service-----

molecular bounce-back, test device for preventing-----

Testing machines, strain-stress, bearing transmits rotary and axial motion-----

Tests, see Examinations—also types, or names of tests.

Teter, N. C., use of stabilized earth block in farm construction-----

Teton Basin project:

construction of Lower Teton division-----

hearings-----

law-----

reports-----

Lower Teton division, Interior Department, report-----

TEUC, see Unemployment Insurance.

Texas:

annual survey of manufactures, 1962, standard metropolitan areas and large industrial counties-----

cattle itch mite, psorergates, reported-----

civil rights, public schools, 1963-----

climate of Texas and adjacent Gulf waters-----

climatological data-----

coastal area, fishery products, wholesale dealers, list-----

cotton ginning costs at single-gin and two-gin plants-----

cotton varieties planted in early producing section, 1964-----

Entry

18897

14875

19184

3097

7688

8766

6803

14340

10645

20948

1271

17913

607

9850

1493

2811

14663

4178

14812

20556

7953

19512

19391

17625

12023

6031

16937

10098

15151

3329

720, 19736

5835

13561



# INDEX 1964

Entry	Entry
<b>Texas—Continued</b>	<b>Textiles—Continued</b>
district courts—	nonwoven fabrics, bonded fiber and
eastern district, inclusion of	conventional felts, current in-
Hopkins County within	dustrial reports..... 21032
Paris division—	removing stains from fabrics, home
law..... 17371	methods..... 11761
reports..... 6285, 17738	statistical data, principal sources,
southern district, transferring	list..... 17069
Austin, Fort Bend, and	synthetic, industrial wage survey... 20438
Wharton Counties from Gal-	textile series reports... 5671, 11590, 13430
veston division to Houston	wool, broad woven goods, current
division—	industrial reports..... 3391
law..... 8221	woven fabrics, current industrial
reports..... 4528, 6284	reports..... 3390, 11904
electric rate book..... 15897	woven, label identification, amend
fresh grapefruit, competitive prac-	act—
tices in marketing..... 33	hearing..... 4501
labor organizations, reporting,	reports..... 12052, 17612
register..... 16573	<i>see also</i> names of textiles.
landings, fish and shellfish..... 4081, 2334	<b>TFE, see</b> Polytetrafluoroethylene.
mineral industry, minerals year-	<b>Thal language, Foreign Service Insti-</b>
book chapter..... 2089	tute, reference grammar..... 9807
Mississippi River and tributaries,	<b>Thailand:</b>
fishery products, wholesale	birds, check list..... 3059
dealers, list..... 736, 18027	citizens, instruction at Military
municipal waste facilities, 1962 in-	Academy, West Point, report..... 15519
ventory..... 3107	citizens, instruction at Naval Acad-
municipal water facilities..... 18912	emy, Annapolis, report..... 15521
oilfield brines, chemical analyses,	country profile..... 3142
etc..... 11328	economy, basic data..... 6855
police and firemen under retire-	foreign trade regulations..... 14378
ment system, coverage under	labor law and practice..... 16588
social security—	USSR description of conditions..... 10982
law..... 13898	Thalidomide, babies, German rehabili-
reports..... 8308, 12232	tation service..... 5749
precipitation data, hourly..... 3578	Thallium, metallic, and its salts, prob-
public school finance program,	lems of labor hygiene in pro-
1962-63..... 596	duction, USSR study..... 14547
Rio Grande Valley, packing mature	Thallium isotopes, radioactive course
green tomatoes, costs, etc..... 20929	of aseptic inflammation of
southern high plains, summary of	cornea under influence of B-
occurrence and development of	particles, USSR study..... 12893
ground water..... 8781	<b>Thanksgiving Day:</b>
sulfur, resources and production..... 20475	President Kennedy's proclamation
women, legal status..... 13540	for 1963..... 6196
women workers, 1960..... 5771	print as House document, report..... 4474
<i>see also</i> Canadian River project.	Tharp, James R., occupational wage
<b>Textbooks:</b>	survey, New York, N.Y..... 18631
Armed Forces Institute..... 557	Tharp, Norman R., relief..... 17182
classification scheme, Educational	Thatcher Ferry Bridge, funds for con-
Materials Laboratory report..... 15842	struction, improper use by Pan-
programed, first results of work	ama Canal Company, GAO re-
with, USSR study..... 5301	port..... 10603
USSR, social science, textbook for	Thawing, soils, trafficability forecasts,
secondary schools..... 12945	pilot study..... 14211
Textile fibers, <i>see</i> Fibers.	Thayer, Louis M., Jr., nomination,
<b>Textiles:</b>	hearings..... 4576
broad-woven fabrics, blends and	Theater of operations, <i>see</i> Combat
mixtures, 1962, current indus-	areas.
trial reports..... 4347	Theobroma, <i>see</i> Cacao.
broad woven goods, current indus-	Theodore N. Gill (ship):
trial reports..... 10048	cruises, south Atlantic Coast, 1953-
civilian industrial technology pro-	54, crab larvae (Callinectes),
gram..... 13822	in plankton collections..... 4743
consumer information, price list..... 21842	Theodore Roosevelt Birthplace Na-
cotton broad-woven goods, current	tional Historic Site, general in-
industrial reports..... 21031	formation..... 21808
cotton typewriter-ribbon cloth, Tar-	Theodosiades, Demetrios, <i>see</i> Douso-
iff Commission report..... 20848	poulos, Demetrios.
fabric imperfections, glossary, Fed-	Theothoropoulos, Constantine, relief..... 296,
eral standard..... 19710	6165, 6412
Federal item identification guides	<b>Therapeutics:</b>
for supply cataloging..... 12296	antibiotic therapy in radiation auto-
supplements..... 3477	infection, reasons for failure..... 4939
fiber products identification act,	cancer therapy, end results, inter-
amend, hearing..... 4501	national symposium..... 21792
knit cloth for sale, current indus-	experimental therapy, USSR trans-
trial reports..... 17095	lations..... 7335
man-made fiber broad woven goods,	hydrogen sulfide therapy in treat-
current industrial reports..... 1814,	ing nervous illnesses, USSR
3391, 17097	study..... 20411
military, wear resistance..... 13430	medical control and therapeutic
narrow fabrics, current industrial	physical culture..... 18383
reports..... 186, 19295	physiology and therapy, USSR
	studies..... 20223

Entry	Entry
	Therapeutics—Continued
	radiation sickness therapy, USSR
21032	experimental studies----- 8952
	therapy of friendship (address)----- 10086
11761	use of student volunteers----- 17116
17069	wave therapy, equipment, methods,
20438	etc., USSR studies----- 6943
18480	X-ray apparatus, problems during
	use, USSR studies----- 9204
8391	see also Chemotherapy—Physical
	therapy.
11904	Thermal and thermionic character-
	istics of large-scale experi-
	mental thermionic converter----- 9619
4501	Thermal conductivity, see Heat trans-
17612	fer.
	Thermal decomposition, see Decompo-
	sition.
9807	Thermal desorption, see Desorption.
3059	Thermal expansion, see Expansion
15519	(thermal).
15521	Thermal insulation, see Insulation.
3142	Thermal performance and radio-fre-
6855	quency transmissivity of sev-
14378	eral ablation materials----- 21740
16588	Thermal radiation:
10982	atmospheric absorption in 9.6
	$\mu$ ozone band region----- 14915
5749	CO <sub>2</sub> in atmosphere----- 14916
14547	derivation on flat surface rotating
	about arbitrary axis in ellipti-
12898	cal earth orbit, application to
6196	spin-stabilized satellites----- 9579
4474	measurements from satellites in
18631	non-adiabatic model of atmos-
17182	pheric movements, results,
	USSR study----- 6905
	properties of solids, measurement,
	symposium----- 1450
	shock layer of blunt bodies at re-
	entry velocities----- 9620
	Thermal shock:
	refractory materials as rocket noz-
	zle inserts, evaluation----- 13331
	resistance of zirconia with metal
	additions----- 20594
	studies of ceramic materials----- 13338
	Thermal soaring plane, see Gliders
	(aircraft).
	Thermal stresses, see Strains and
	stresses.
	Thermionic converters:
10603	cesium diode, application of study
14211	of zero-field electron work
4576	function of metal immersed in
	gas----- 14886
	cesium vapor, for nuclear applica-
	tions, research program----- 14786
	materials, study----- 11496
	molybdenum emitter, low voltage
	are power converter, evalua-
	tion----- 5869
4743	radiator area characteristics of out-
21808	of-pile thermionic gas cycle
296,	space power systems----- 16721
6, 6412	thermal and thermionic character-
	istics of large-scale experi-
	mental converter----- 9619
	Thermionic emission:
	electron and ion emission, USSR
	study----- 3035
4939	ion sources for isotopic analysis of
21792	lithium----- 8061
7335	Thermionic powerplant, see Nuclear
	reactor powerplants.
	Thermistors:
20411	probe for measuring particle orbital
18283	speed in water waves----- 12340
20223	superhigh frequency, for power
	measurements, temperature
	compensation, USSR study----- 11097

Entry	Entry
	Thermistors—Continued
	Thermocouples:
	connectors for leads saves wire,
	etc----- 11377
	heat-transfer measurements on flat
	plate and attached protuber-
	ances in turbulent boundary
	layer----- 20589
	materials, selection and properties,
	errata----- 11432
	sensor, circuit for continuous moni-
	toring----- 20546
	Thermodynamics:
	Brayton cycle space-power system
	applications, analytical stud-
	ies----- 20610
	data for columbium (niobium) car-
	bide----- 13122
	equilibrium, local, departures in AO
	star atmosphere----- 7519
	high-temperature, and thermo-
	physics, USSR study----- 10763
	properties of—
	cuprous and cupric ferrites----- 18696
	high temperature gases----- 7988
	hydrogen at high temperatures,
	tables----- 5502
	hydrogen from 300° K to 20,000°
	K----- 11359
	hydrogen-oxygen system----- 18727
	perfluorocyclobutane, real gas----- 14757
	products of cyanogen-oxygen com-
	bustion----- 18753
	saline water----- 19814
	sodium bromide and sodium io-
	dide at low temperatures----- 11339
	property values for gaseous and
	liquid carbon monoxide from
	70 to 300° K----- 3050
	shock-heated flow parameters, hy-
	personic, as function of flight
	velocity and altitude----- 14900
	Soviet handbook, brief description----- 9122
	Thermoelectric generators, SNAP 7B,
	production of strontium-tita-
	nate radioisotope fuel----- 5968
	Thermoelectric heat exchanger dem-
	onstration unit, final report----- 8089
	Thermoelectricity:
	heat pump research----- 846
	science and technology, Soviet liter-
	ature survey----- 150
	semiconducting compounds with
	thermoelectric applications, re-
	port----- 16896
	Thermoluminescence, see Lumines-
	cence.
	Thermomechanical treatment and
	strengthening of alloys, USSR----- 12899
	Thermometers:
	clinical, Tariff Commission report----- 11653
	resistance—
	heat transfer measurement----- 9531
	thin-film, measurement of radia-
	tive heat transfer----- 9532
	Thermo-millammeter instruments, 1.0
	to 1000 MA full scale----- 11508
	Thermophototropism:
	corticated alkaline earth titanates----- 13234
	perovskite-structured titanates, pro-
	posed mechanism for behavior----- 9606
	phenomenological model----- 5525
	Thermoplastics, see Plastics.
	Thermosphere, temporal variation of
	O/Ns ratio notes on Wright's
	Interpretation----- 20960
	Thesaurus of ASTIA descriptors, DDC
	supplement----- 14165
	Thieme, Darius L., African music----- 14715
	Thiolacetic acid, synthesis, procedure----- 18701
	Thiols, synthesis of new thiols and
	acetyl derivatives----- 5267
	This is the Army----- 20995
	Thistles, Canada thistle, control, etc----- 29

# INDEX 1964

	Entry		Entry
Thomas, Carolyn, use of group methods with foster parents-----	8146	Thorium fluoride, molten systems, with alkali fluorides, electric conductivity and density-----	18684
Thomas, Cecil A.: floods of Feb. 1962 in southern Idaho, etc-----	18118	Thorne, H. M., oil-shale technology, review-----	14737
Snake River basin-----	6822	Thorsten, Kenneth: occupational wage survey— Davenport, Rock Island, Moline, Iowa-Ill-----	7401
Thomas, Delbert D., soil survey report, Pepin County, Wis-----	11613	Sioux Falls, S. Dak-----	7409
Thomas, Ella C., reports of Tax Court-----	7810, 21897	Waterloo, Iowa-----	7407, 9458
Thomas, H. E.: drought effects along Pacific Coast in California-----	808	Thought: functions, possibility of modeling, USSR study-----	2553
effects of drought in basins of interior drainage-----	807	processes investigation, USSR study-----	21397
water and Southwest, what is future?-----	18120	Thread, cotton, Quarpel application and test methods-----	5671
Thomas, J. W., aerosol penetration through filter paper-----	4297	Threading hook facilitates safe recovery of heavy loads-----	20563
Thomas, James L., Wenner bridge-----	1531	Three-body problem: earth-moon system, small body in vicinity of stable liberation points-----	7557, 20531
Thomas, James R., interrelationships of nitrogen, phosphorus, and seasonal precipitation in production of bromegrass-crested wheatgrass hay-----	5858	report restricted, series solution for orbits, according to perturbation method-----	20611
Thomas, John F., Cuban refugee program-----	7847	Three Rivers, Tex.: Frio River, flood control, authorize survey-----	13915, 14088
Thomas, Numa E., retrometer, light-beam communications system-----	11262	law report-----	15016
Thomas, Virginia F., home economics in institutions granting bachelor's or higher degrees, 1961-62-----	4623, 15475	Thresher (nuclear submarine): in memoriam, Apr. 10, 1963-----	15016
Thomas, William W., relief-----	9873	Thrift, <i>see</i> Saving and thrift.	
Thomason, Bruce, medical consultation in vocational rehabilitation-----	5594	Thrust: cold jets discharging from exhaust nozzles designed for VTOL downwash suppression-----	11397
Thompson, F. H., K-band mixer-----	19788	electric and chemical systems for space station drag cancellation-----	20578
Thompson, G. A., regional geology of Steamboat Springs area, Washoe County, Nev-----	12308	high, boosters, acoustic efficiency trends-----	14841
Thompson, John W., guide to lower costs and greater efficiency in curing cattle hides-----	34	high, coefficients, wind-tunnel measurements on lifting rotor-----	18785
Thompson, Ralph A., stress cracks and breakage in artificially dried corn-----	6526	low-thrust orbit raising in continuous sunlight-----	9567
Thompson, Robert F., testimony, hearings-----	1699	Mars and Venus orbiting probes, electrically propelled, constant thrust, parametric study-----	21755
Thompson, Ross C.: asparagus culture----- cauliflower and broccoli, varieties and culture-----	19066	vector orientation effects during manual control of lunar landings from synchronous orbit-----	14853
Thompson, Samuel W., histopathology of mice fed irradiated food-----	110	vectoring effectiveness for 3 exit vane cascade ducted fan configurations-----	20575
Thompson Canyon, geology-----	4776	Thrustors: electron-bombardment, heavy-molecule propellants investigation-----	16709
Thomson, Ker C., seismic model impactor-----	1737	electrostatic for space propulsion-----	11381
Thomson, M. T., historical floods in New England-----	6825	electrostatic, theoretical performance with analytic space-charge flows-----	9617
Thomson, Robert G., camber flutter characteristics of monocoque and multiweb wings-----	1482	electrothermal, noncryogenic propellants-----	7552, 14848
Thoracic cage impedance measurements-----	76, 5906-7, 9988-89, 15238	resistance-heated hydrogen, research-----	11408
Thoracic surgery, <i>see</i> Surgery.		thermal arc-jet, cryogenic propellant feed systems-----	13153
Thorax, <i>see</i> Chest.		<i>see also</i> Ion thrusters.	
Thorium: alloys, structure and properties-----	10967	Thunderstorms: May 4, 1961, wake-----	11708
area, Bokan Mountain, southeastern Alaska-----	6798	penetration by aircraft flying at supersonic speeds-----	11705
minerals yearbook chapter-----	18710	Thyroid gland: bovine, in vitro measurement of iodine-131-----	7697
New Hampshire Paleozoic plutonic series, 3 early groups, distribution-----	21350	functions during stress, mechanism of change, USSR study-----	21398
preparation by sodium reduction of thorium tetrachloride-----	20503	glandular research, USSR study-----	20759
prophylactic and protective measures in working with thorium, USSR study-----	14463	human, iodine-131 in post-mortem influence on altitude tolerance-----	5908
solvent extraction recovery from siliceous Colorado ores-----	13133	irradiation and other radiological studies, USSR articles-----	21447
uranium-thorium systems, alloys structure-----	5953		

# JANUARY-DECEMBER

Entry

6084

1737

7401

7409

9458

2553

1397

5071

0563

7557

0531

0611

3915

4088

5016

1397

0578

4841

8785

9567

21755

14853

20575

16709

11381

9617

14848

11408

13153

11708

11705

7697

21398

8877

20759

5908

21447

Entry

TI-II (periodical) : translations -----	7294, 12756
TIAS series -----	1604-22-
3147-62, 4095, 5699-5709, 7774- 99, 9808-38, 11626-644, 13467- 481, 15107-127, 16874-880, 18962-986, 20823-845, 21881- 893.	
Tibet, regulation of election of Peo- ple's Congress in autonomous region -----	1307
Ticks : blood-sucking, vertebral leucocytes in intestines, survival, USSR study -----	9007
chemoreception, USSR study -----	9199
USSR, biological studies -----	16409
Tides : computation of S <sub>2</sub> tidal component for Pacific Ocean water area on BESM-2 electronic computer, USSR study -----	957
current surveys by photogrammet- ric methods -----	4407
current tables, 1965, Atlantic Coast of North America -----	19342
tables— central and western Pacific Ocean and Indian Ocean, 1965 -----	13812
Europe, west coast of Africa and Mediterranean, 1965 -----	13813
North and South America— east coast, 1965 -----	11960
west coast, 1965 -----	6109
Virginia Beach, Va., nearshore tidal and nontidal currents -----	12342
see also Atmospheric tides.	
Tien Shan, middle, Lower Carbonifer- ous deposits, USSR study -----	5166
Tiensuu, Victor H., absorption cor- rections for intensity of X-rays scattered by weakly absorbing polypolytype-crystalline mate- rials -----	13131
Tientsin, China, general economic policy, translation -----	18464
Tillanne (Finnish newspaper) : and Jarno Pennanen, editor, contro- versy over -----	21441
Tiles : ceramic mosaic, workers petition, Tariff Commission report -----	1627
tile setters, employment outlook -----	13056
Tillamook, Oreg., soil survey report of area -----	20803
Tillamook Indians : disposition of funds— law -----	17365
reports -----	12110, 15717
Tilman, Milton M., effects of substi- tuting cobalt for nickel on ten- sile properties and hardness of stainless steel -----	11333
Timber : appraisal, Forest Service policies and procedures, general re- view -----	2351
blowdown problems and solutions— estimating maximum allowable yields by linear programing -----	2368
Indian, amend act relative to sale— law -----	8651
reports -----	10144
Intermountain Region, story -----	498, 8319
losses from fire, windstorm, etc.— management -----	12436
and economic analysis, case study -----	2367
laboratory, Crossett, Ark. -----	8678
Michigan -----	8701
plan, Gifford Plachot National Forest, report -----	12477
	2373

Entry

Timber—Continued Pacific Northwest— stumpage and log supply, quar- terly report -----	3830
windthrown, survey, 1962 -----	15937
resources— New Hampshire -----	8700
outlook (remarks) -----	10588
West Virginia -----	21329
sales contracts in California region, Forest Service, deficiencies in award and administration, GAO report -----	19752
trends in western Oregon and west- ern Washington -----	8683
utilization research activities of Forest Service -----	7939
volume— Colorado -----	6745
Minnesota -----	12461
western South Dakota -----	14820
West Virginia, cost of marking hardwood sawtimber -----	8651
windthrown and standing, high- lead yarding production rates, comparison -----	18071
windthrown, disease potential, sum- mary report -----	2396
see also Hardwoods—also names of timber trees.	
Time : real-time compensation for tropo- spheric radio refractive effects on range measurements -----	20530
standards, uniform system, legisla- tion, hearings -----	19514
Time-concentration effects in rela- tion to oxygen toxicity in man -----	4258
Timers, solid state satellite separa- tion sequence timer -----	16685
Timetables, see Railroads.	
Timmins, Merrill S., Jr., safe use and storage of flammable liquids and gases on farm -----	9942
Timmmons, C. O., study of autophobic liquids on platinum potential method -----	20709
Timocharis, LAC 40, lunar chart -----	1740
Timpanogos Cave National Monu- ment, general information -----	14980
Tin : metallurgy, recovery from hardhead by filtration -----	20505
mineral industry surveys, monthly— minerals yearbook chapter -----	4082
ore reserves, Lost River mine area, Alaska -----	20515
pig, disposal from national stock- pile— hearings -----	8752
reports -----	13993
Tingdahl, Marvin A., cargo handling system A/A32H-4 -----	13932, 14097
Tingidae, see Lace-bugs.	
Tintic Junction quadrangle, Utah, geology -----	7971
Tintic mining district, productive parts, study -----	6797
Tip moths, control fails to improve height of planted loblolly pines in Maryland study -----	8755
Tips on fatigue -----	8652
Tire hydroplaning, see Hydroplaning.	
Tires : automobile, Soviet production, im- provement necessary -----	13367
automotive, dual distribution in in- dustry, report -----	18276
cord and fabrics, current industrial reports -----	12284
Federal item identification guides for supply cataloging -----	3391, 13760
supplements -----	12289
large diameter tubeless, emergency repair kit -----	3470
	5722



# INDEX 1964

	Entry		Entry
Tires—Continued		Titanium—Continued	
stationary and towed pneumatic,		metallurgy, USSR translation.....	5238
distribution of stresses beneath	15878	mineral industry survey, quarterly	4083
TIROS (television infrared observation satellite), <i>see</i> Satellites.		minerals yearbook chapter.....	18711
Tishomingo National Wildlife Refuge:		placer deposits, Idaho.....	1438
birds, list.....	6723	placer resources in western Montana	7444
wildlife management unit.....	698	reactivity with oxygen.....	16722
Tissues:		refining cells, development.....	11338
biological, electric parameters in microwave range, USSR study.....	18494	resources, Nelson and Amherst Counties, Va.....	11335
connecting, reactive proliferation, effect of humizol, USSR study.....	16183	southeastern United States.....	16624
connective tissue growth, ribonucleic acid and collagen synthesis, USSR study.....	16345	welding, USSR studies.....	1141
diet as factor in structure and composition of tissues of rat with aging.....	19080	Titanium borides:	
gingival—		diborides (Ti,V) B <sub>2</sub> and (Ti,Cb) B <sub>2</sub> and (Ti,Ta)B <sub>2</sub> preparation and evaluation.....	11318
human bacterial invasion, simulation with carbon particles.....	8000	electrochemical oxidation of titanium diboride.....	16715
micro-organisms in human.....	1748	pseudobinary system TiB <sub>2</sub> -CrB <sub>2</sub> , corrosion resistance.....	11324
intra-vitam staining, USSR study.....	12675	Titanium carbide, cermet, surface failure in rolling contact at temperature to 2000° F.....	18783
mammalian, in vivo measurement of total gas pressure.....	1789	Titanium chlorides, producing titanium lower chlorides, methods.....	9499
resistivity, thoracic cage impedance measurements.....	9987	Titanium-columbium diboride, <i>see</i> Titanium borides.	
structure, properties and pathological changes of elastic structures, current data, USSR study.....	14593	Titanium diboride, <i>see</i> Titanium borides.	
transplants, new break in barrier of incompatibility, USSR study.....	21412	Titanium dioxide:	
Titanates:		determination of no injury, etc. to U.S. industry by imports from Japan.....	11656
correlated alkaline earth, thermophototropism.....	13234	pigment particle size separation.....	14787
perovskite-structured, proposed mechanism for thermophototropic behavior.....	9606	Titanium nitride, preparation.....	13123
strontium titanate radioisotope fuel production for SNAP 7B thermoelectric generator.....	5968	Titanium oxide, fabrication of dielectric films.....	7996
Titaniferous iron ores, <i>see</i> Ilmenite.		Titanium-tantalum diboride, <i>see</i> Titanium borides.	
Titanium:		Titanium-vanadium diborides, <i>see</i> Titanium borides.	
alloys—		Titles (land), <i>see</i> Land.	
and plating, application of coatings to strengthen surface, USSR study.....	9187	Tiverton quadrangle, R.I.-Mass., bedrock geology.....	15942
brazing, problems.....	1350	Tobacco:	
corrosion, USSR articles.....	11222	acreage allotments, extend time to file 1964 leases—	
effects of Ti and Al, etc., on mechanical properties of ilmenite 80A, Japanese study.....	12962	law.....	17328
fatigue-crack propagation.....	20587	reports.....	13930, 17721
hot-salt stress-corrosion cracking phenomenon.....	21730	Africa's industry.....	764
hot stamping of titanium alloy blanks, USSR study.....	20218	auction markets, functions and operations, hearing.....	4486
modification, USSR studies.....	12584	burley, light air-cured, market review, 1963 crop.....	15189
molybdenum-0.5-percent-titanium sheet—		crop summary.....	4084
bend transition temperature.....	20583	fire cured and dark air-cured, market review, 1963.....	9913
oxidation-resistant coatings.....	18733	flue-cured—	
oxygen effect on properties and heat treatment.....	4909	identification of certain varieties under price support program.....	9929
relative susceptibility to salt stress corrosion at 550° F.....	1460	market review, 1963 crop.....	5794
residual static strength at 109° F, 70° F, and 550° F.....	5514	foreign agriculture circulars.....	3520
sheet stamping, USSR study.....	5060	foreign trade prospects.....	4750
Ti-8-Al-1Mo-IV sheet, fatigue behavior.....	13139	health factors in use, authorize research by Agriculture Dept.—	
translations.....	2860	hearings.....	8353
USSR research.....	12816	report.....	4484
corrosion, USSR articles.....	11222	industries, 1963, statistics.....	4832
electrorefining, transfer of selected metals.....	11341	industry of western Asia.....	8627
equipment in production of nickel, USSR study.....	10889	laws enforced by Alcohol and Tobacco Tax Division, guide for law enforcement officers.....	14366
ingot and mill products, current industrial reports.....	3390	market reports, season's first.....	15191
		mildew, oospores research, Bulgaria studies.....	1000
		production and marketing in Southern Rhodesia, Northern Rhodesia, and Nyasaland.....	14291
		production and trade in Madagascar (Malagasy Republic).....	12430
		products, prevent double taxation—	
		law.....	13891
		reports.....	8312, 12235

	Entry
Tobacco—Continued	
statistics, 1963.....	7949
stocks report.....	4086
tax guide.....	8808, 18168
tobacco situation.....	4085
Turkish, flavor contribution in blended cigarettes.....	13571
what is your crop really worth to you?.....	6627
see also Cigars.	
Tobacco research laboratory, hear- ings.....	8353
Tobak, Murray:	
angle-of-attack convergence of spinning bodies entering at- mospheres at large inclinations to flight path.....	21777
study of nonlinear longitudinal dynamic stability.....	20620
tumbling bodies entering planetary atmospheres.....	14905
Tobias, Jerry V., binaural beat per- ception problem.....	4316
Toda, Masanoa:	
logic of systems, introduction to formal theory of structure.....	7089
utility, induced utilities and small worlds.....	63
Todd, F. H., series 60, methodical ex- periments with models of single-screw merchant ships.....	13438
Todd, Ruth, planktonic foraminif- era from deep-sea cores off Eniwetok Atoll.....	15945
Toeg, Rifka I., relief.....	8263
Togo:	
foreign trade regulations.....	14383
ministers present plans and poli- cies.....	12752
official publications, 1946-58, guide.....	11306
soil studies status.....	7158
Tollet articles:	
Federal item identification guides for supply cataloging.....	12296
supplements.....	3477
Toledo, Ohio:	
occupational wage survey.....	13063
principal electric facilities, map.....	674
Toler, James R., simulation of heli- copter and V-STOL aircraft.....	13322
Tolerance (engineering):	
dimensioning and tolerancing, mili- tary standard.....	10448
Tolliver, Wayne E.:	
earned degrees conferred, 1960-61, enrollment for advanced degrees, fall 1961.....	2269
junior-year science, mathematics, and foreign language students, first-term 1962-63.....	8482
10467	
Tolls:	
St. Lawrence seaway, tariff of tolls, agreement with Canada.....	18971
U.S.S. Alabama, permit passage through Panama Canal with- out toll charges.....	17279
law.....	15703
reports.....	13977
Welland Canal, suspension, agree- ment with Canada.....	11640
Tolson, Hillary A., laws relating to National Park Service.....	5568
Toman, Kurt:	
antipodal image of electromagnetic source.....	13640
central-force laws for elliptic orbit.....	13636
Tomato paste, standards for grades.....	15193
Tomato puree, canned, standards for grades.....	15192
Tomatoes:	
canned, standards for grades.....	13562
controlling tomato diseases.....	19048
11757	

	Entry
Tomatoes—Continued	
mature green, packing in Lower Rio Grande Valley of Texas, costs, etc.....	20929
on your table.....	20924
repacking methods and equipment.....	32
Tombaugh, Larry W., estimating num- ber of visitors to national for- est campgrounds.....	12470
Tombligbee River, Memphis lock and dam, change name, hearings.....	2123
Tommy Lee, see Lee Suey Jom.	
Tonto National Monument, general information.....	5570
Tooele County, Utah:	
geology and mineral deposits.....	14341
geology of Tintic Junction quad- rangle.....	6797
Tooker, Edwin W., altered wallrocks in central part of Front Range mineral belt, Colo.....	4795
Tooker, Elisabeth:	
ethnography of Huron Indians, 1615-49.....	11814
departmental edition.....	12019
document edition.....	
Tool-set, see Tools.	
Tools:	
Army Dept., unnecessary costs re- lating to reassignment of man- agement responsibility to De- fense Supply Agency, GAO report.....	6788
diamond, difficulties in manufac- ture.....	5038
plastics for tooling, materials, tech- niques, tool design.....	12305
see also Hand tools—Measuring in- struments.	
Toombs, George L., radiological sur- vey of lower Columbia River in Oregon, Jan. 1962-July 1963.....	21855
Tooth, see Teeth.	
Tooth extraction, see Exodontia.	
Topographic maps, see Maps and charts.	
Topology:	
metricization of topological space.....	7566
optimal control in Banach spaces, essential conditions, USSR study.....	18471
spaces on normally embedded sets.....	7567
Upside sounder, see Satellites.	
Torches, cutting, miniature oxygen- hydrogen, constructed from hypodermic needle.....	11376
Tornadoes:	
mechanics.....	11695
safety rules.....	15164
visual observations beneath devel- oping tornado.....	19187
Torosian, Toros, and wife, relief.....	10378
Torpedo tubes, see Tubes.	
Torque:	
eddy-current, magnetically induced, effects on spin motions of earth satellite.....	11389
observed torque-producing forces acting on satellites.....	16723
Torres, Edward, testimony, hearings.....	8456
Torsion, see Strains and stresses.	
Tort claims, see Claims.	
Tortricidae, see Microlepidoptera.	
Totem poles in Interior Dept., stories.....	2444
Tourism, see Tourist trade—Visitors.	
Tourist trade:	
increase in U.S., Government as- sistance (remarks).....	11076
plant tours for international vis- itors to United States.....	7826
tourist industry and redevelopment areas, statement.....	15257
trademark information.....	8459

# INDEX 1964

	Entry		Entry
Tourists, Israeli, visit to Vil'nyus, Soviet press report.....	20124	Tracking—Continued	
see also Tourist trade.		satellite, characteristics of X-Y mount for data acquisition antennas.....	13213
Toward new dimension in Atlantic partnership (address).....	5698	see also Radar tracking.	
Towels, current industrial reports.....	11901	Tracking stations:	
Tower, Frederick J.:		agreement with—	
economy of—		Australia.....	1618
Costa Rica.....	8812	Great Britain, Canton Island.....	1609
Republic of Panama.....	8814	Malagasy Republic.....	5704
Towing:		Nigeria.....	21891
motor vehicles, exemption from interstate commerce act—		Spain.....	9835
law.....	1937	spacecraft tracking system, range and range rate, development.....	13214
report.....	490	Tractor-logging costs and production in old-growth redwood.....	8689
Town, Joseph W., cost estimates and optimum conditions for continuous-circuit leaching of mercury.....	14744	Tractors:	
Town River:		Army overland train Mark II, dust concentration measurement.....	16894
engineer report—		current industrial reports.....	3390, 11902
departmental edition.....	8522	Federal item identification guides for supply cataloging.....	12289
document edition.....	8249	supplements.....	3470
Towns, see Cities and towns.		Federal use tax on truck tractors.....	19820
Townsend, Marjorie R., medium-data-rate digital telemetry system.....	14859	Ford Motor Company, distributors franchises, termination, hearing.....	17891
Townsend, Merrill, reinforced concrete pipe culverts, etc.....	1571	planning shipments.....	21501
Toxic effect of molds on grain, USSR.....	14523	USSR industrial development, translations.....	926, 938, 1194, 1273, 1317, 2574, 2635, 2801, 2822, 2836, 2878, 4916, 4953, 5014, 5036, 5052, 5180, 5222, 6967, 7273, 7313, 8927, 8937, 8998, 9047, 9175, 9268, 10915, 11053, 12009, 12704, 12777, 12825, 14570, 16021, 16355, 16401, 16511, 18287, 18409, 18432, 19904, 20022, 20042, 20260, 20279, 20282, 20306, 20379, 21436, 21501, 21643, 21651.
Toxicants, see Poisons.		Trade, see Commerce—Retail trade—Service trades—Wholesale trade—also names or classes of commodities.	
Toxicology:		Trade agreements, see Commercial treaties.	
chronic exposure to organophosphate insecticides, effects on central nervous system.....	5999	Trade and Economic Affairs, Joint United States-Canadian Committee, see United States-Canadian Joint Committee on Trade and Economic Affairs.	
mechanisms of action of insecticide endrin.....	5994	Trade associations, national, of construction and building materials industries, list.....	148
organic phosphorus insecticides—and industrial hygiene during their use, USSR study.....	6944	Trade centers:	
USSR study.....	2818	overseas, profitable sales.....	15988
toxicology of mesidine, USSR study.....	1054	U.S., show the world, sell the world.....	4849, 14371
USSR studies.....	14467	Trade expansion act of 1962, see Commercial treaties.	
Toxins, immunization and resistance, USSR study.....	20240	Trade fairs, see Fairs.	
see also Biological products—Endotoxins.		Trade marks, see Trademarks.	
TPA, see Technical publications announcements.		Trade Mission to Australia, report, 1964.....	12557
TRA series.....	3254	Trade Mission to Germany, report, 1964.....	10707
Trace elements:		Trade Mission to Hong Kong, report, 1963.....	4865
determination in radiation dermatitis, USSR study.....	16180	Trade Mission to Kenya, Tanganyika, Uganda, report, 1963.....	6861
tantalum in columbium, X-ray spectrographic analysis.....	16634	Trade Mission to Malaysia, report, 1963.....	4866
trace mineral losses in sweat.....	19224	Trade Mission to New Zealand, report, 1964.....	12558
Tracer studies:		Trade Mission to Venezuela, report, 1964.....	12559
application of nuclear techniques to manufacture of high-reliability printed circuit boards.....	13718	Trade Negotiations, Office of Special Representative, see Special Representative for Trade Negotiations, Office of.	
krypton-85 development as universal tracer.....	19235		
radiation detection instruments, whole body counters.....	19269		
radiotracer techniques in study of gasoline storage stability.....	13104		
tritium, use in studies of gasoline storage stability.....	7450		
use in evaluation, etc., of practices for removal of pesticide residues from foods.....	19243		
Tracey, Joshua I., Jr., general geology of Guam.....	19784		
Trackage, maintenance, Navy manual.....	11732		
Tracking:			
adaptive dynamic response characteristics of human operator in simple manual control.....	11395		
compensatory and pursuit tracking of pitch.....	5466		
human performance under transverse accelerations.....	7469		

Entry	Entry
	Trade practices:
	rules—
	braided rug industry..... 14261
	household furniture..... 2332
3213	phonograph record industry..... 19713
	Trade schools, <i>see</i> Technical education.
	Trade unions, <i>see</i> Labor unions.
	Trademarks:
	code of Federal regulations..... 8576
	decisions, weekly..... 3810
	decisions, yearly, 1963..... 11528
	departmental edition..... 10155
	document edition..... 7671
3214	index, 1963..... 7671
8689	laws, investigation—
	authorization, report..... 6454
	report..... 10402
	lists, in official gazette..... 3810
6894	publications, price list..... 7684
1902	tourists information..... 8459
	Trades, <i>see</i> Occupations—also names of trades and types of workmen.
	Tradescentia paludosa, microspores under influence of space flight, new types of chromosome rearrangement, USSR study..... 4899
	Trademan 1 & C, Navy training course..... 7644
	Trading with the enemy:
	act, amend—
	hearings..... 12143
	law..... 17349
	reports..... 13982, 17539
	administration of act, investigation—
	extension, report..... 4562
	report..... 10398
	Traffic:
	assignment manual for application with large, high speed computer..... 15073
	deep sea domestic waterborne—
	1957-61..... 4874
	1958-62..... 14400
	District of Columbia act, amend to increase fees for learners' permits—
	law..... 8226
	reports..... 480, 6322
	highway regulation in emergency (remarks)..... 15375
	St. Lawrence Seaway report, 1963, <i>see also</i> Air traffic—Transportation.
148	Traffic control, <i>see</i> Air traffic.
5988	Traffic managers, <i>see</i> Managers.
	Traffic safety, <i>see</i> Safety of life.
	Trafficability:
	and mobility research..... 12353
4371	snow trenches..... 8512
	soils, tests, Marsh screw amphibian..... 6600
	tests on confined organic terrain (muskeg)..... 21283
	Trafton, George H., employment and earnings of self-employed workers under social security..... 16863
	Trailblazer, <i>see</i> Rockets.
	Trailers:
	Federal item identification guides for supply cataloging..... 12289
4865	supplements..... 3470
6861	house, and mobile dwellings of members of uniformed services, transportation, increase allowances—
4866	hearings..... 15799
2538	law..... 17265
2559	reports..... 10250, 12100
	truck, current industrial reports..... 3390, 10060
	two-horse trailer, building plan..... 19097
	used as storage bins for seed cotton..... 7941

Entry	Entry
	Trails:
	national forests—
	construct and maintain—
	law..... 21149
	reports..... 14103, 19487
	developing self-guiding trail..... 19092
	Train control devices, statistics..... 2465
	Trainee's guide for communications yeomen, class A..... 18849
	Trainers (devices), <i>see</i> Training devices.
	Training:
	ADP, services and sources of information, 1964-65, directory..... 19333
	apprenticeship and journeyman (remarks)..... 87
	apprenticeship and training representative, examination announcement..... 13807
	civil defense literature, list..... 15051
	economic opportunity act of 1964, employment opportunities for girls 16-21 years old..... 16926
	family breadwinners, special needs..... 11247
	fire safety training..... 6793
	geological engineers at Moscow Geological Prospecting Institute..... 21594
	hard-core unemployed, demonstration-research project..... 21274
	job changing and manpower training..... 13027
	legislation enacted, etc, 88th Congress..... 21242
	manpower development and training program—
	act, amendments, explanation..... 7354
	act, amendments of 1963—
	hearings..... 397
	law..... 1943
	reports..... 2048, 4527
	act, explanation..... 21655
	act, text..... 13026
	clothing maintenance specialist..... 15839
	companion to elderly person..... 15840
	disadvantaged groups..... 11246
	employer's guide to on-the-job training..... 20977
	employment data needed for evaluating effectiveness, GAO report..... 10610
	factors in workers' decisions to forego retraining under..... 18610
	family dinner service specialist..... 15845
	forestry aide..... 15846
	highway engineering aide..... 14188
	homemaker's assistant..... 15847
	hotel and motel housekeeping aide..... 15848
	landscape aide..... 15850
	management aide in low-rent public housing projects..... 15851
	meeting challenge of changing skills..... 10479
	Norfolk, Va., casework prevents dropouts..... 13024
	occupational mobility through MDTA training..... 16568
	occupational training of women, report of Secretary of Health, Education, and Welfare..... 18609
	report of Secretary of Labor..... 8786
	suggested curricula..... 9374
	supervised food service worker..... 19631
	under act of 1962..... 15858
	visiting homemaker..... 19943
	manpower, report—
	1963, statistics..... 15860
	1964..... 11249
	mentally retarded, special needs..... 7359
	methodology, programmed instruction..... 20427
	occupational training, pathway to employment..... 13678, 17049
	personnel in neurosurgical care system, USSR articles..... 7361
	14634



# INDEX 1964

	Entry		Entry
Training—Continued		Transcaucasia, synoptic processes and turbulence in upper troposphere, USSR study	20052
psychiatric-mental health trainee stipends for nurses	13289	Transceivers (radio):	
public health traineeship program	11580	lightweight safety helmet holds radio transmitter, receiver	13206
retarded girls, experimental programs	13785	Transducers:	
task analysis—		apparatus for removal of dental calculus with ultrasound, USSR study	1252
development of method, and theory of training	18853	hot-wire, cooling method prolongs life	14804
guidelines	18854	improved variable-reluctance, improves transient pressures	13176
methods, literature review	18855	micrometeorite—	
training analysis procedure (TAP)—		advances micro-measurement range	13203
handbook for application	11492	use for measuring heartbeat of bird embryos	11364
theoretical development	11491	pressure—	
workers in American Industry, survey, 1962	11817	can be faired into surface	13208
see also Education—Learning—Military education—Naval education—Staff training—Vocational education—also subjects.		methods for dynamic calibration	3046
Training devices:		spherical, acoustic pressure distribution, formulas	18859
and aids, Federal item identification guides for supply cataloging	12297	vibration, device for calibration at amplitudes up to 20g	20547
supplements	3478	welded pressure, made small as 1/4 inch in diameter	9557
enhancement of fire control, technician proficiency	18852	Transference numbers, see Transport numbers.	
guide, Naval Training Device Center	5617, 7656, 13348	Transfluxor circuit amplifies sensing current for computer memories	9550
human factors technology in design of simulators for operator training	7648	Transformation (metallic):	
training analysis procedure (TAP)—		isothermal, and hardenability of low-alloy steel, effect of uranium	18697
handbook for application	11492	Transformers, see Electric transformers.	
theoretical development	11491	Transistors:	
Training schools, see Reformatories.		frequency standards, Polish study	21597
Training villages, see Villages.		fundamentals of electronics	20688
Trains, see Overland train—Railroads.		instrumentation system for acoustical data acquisition	20608
Trajectories:		logical elements and tape-wound cores, USSR study	19957
central, of point of variable mass, general properties, USSR study	8903	low-power transistorized circuit provides staircase waveform	14818
flight-path angle of reentry vehicle in upper atmosphere, approximate solutions	16696	power, indium foil with beryllia washer improves heat dissipation	11368
guidance for lifting reentry at supercircular velocity	13247	proton damage in semiconductor devices	11354
human free-falling	13617	transistorized circuits, servicing techniques, guide	15001
lunar—		transistorized trigger circuit is frequency-controllable	13197
landing, analytical study with reference to lunar-orbit-rendezvous mode and abort situations	3015	two-stage temperature-stabilized emitter-follower circuit, design	18193
position fix accuracy, factors affecting measurements	7539	VHF transmitter design for spacecraft applications	13215
powered-descent for manned landings, study	18756	Transit system, see Local transit.	
return from moon, entry range and landing lighting conditions	7527	Transition characterizers of VTOL aircraft powered by 4 ducted tandem propellers	9808
vehicles-geometric constraints on recovery	5881	Translating machines:	
reentry, capability of proportional-type lateral control system in providing aerodynamic heading-angle trajectory control	14876	foreign developments, translations	949, 2578, 2716, 2783, 2852, 2915, 6921, 6981, 7118, 8914, 9093, 9125, 11056, 11127, 16090, 16147, 16527, 20169
satellite rendezvous, energy-optimal in 3 dimensions for terminal phase	13251	mathematical linguistics, and machine translation	18512
Scout vehicle during 4th-stage reentry flight, analysis	13236	organization, application of computers in coding and machine translation	1018
space maneuvers, guidance equations	18736	perception theory	1059
space vehicles, secondary errors and off-design conditions in optimal estimation	7528	speech intelligibility computation, USSR study	1139
Tramways, see Cableways.		Japan, trends in machine translation	9093
Tranquillizing drugs:			
effects on body temperature	5998		
effects on physical work capacity and orthostatic tolerance	13736		

# JANUARY-DECEMBER

Entry	Entry	Entry
	<b>Translations:</b>	<b>Transportation:</b>
20052	Air Force Department-----80-82,	air-----
	4261-63, 5912-17, 8007-8, 9989	America's leadership (address)---15368
13206	Civil Aeromedical Research Institute, bibliography of recent material-----139	certification and operation rules for certificated route air carriers, civil air regulations amendment-----10505
1252	index, NIH Library, 1954-63-----16745	delivery of supplies and equipment in Field Army, Army field manual-----20990
14804	medical, bibliography-----18917	unnecessary costs incurred by Post Office Dept. in transporting 1st class mail, GAO report-----12497
13176	1959-62, subject index-----16755	allowances under canceled, etc., orders, authorize-----6496
	July-Dec. 1962-----18518	hearing-----1967
	Jan.-June 1963-----18518	law-----2212
	technical-----	report-----
13203	bibliography, OTS periodical-----4080	amendments to Federal laws-----
11364	periodicals translated in, basic list-----4325, 18997	hearings-----6502-3
13208	National Aeronautics and Space Administration-----1480,	report-----6288
3046	3035-40, 5530-34, 7563-68, 9621-27, 11422-24, 13259-263, 14906-926, 16726-733, 18796-798, 20622-630, 21778-780.	Armed Forces dependents, baggage etc., advance return-----17866
18859	Transmission lines, see Electric lines.	hearing-----17290
20547	Transmission of information by extraterrestrial civilizations, USSR-----14648	law-----15740
9557	Transmitters:-----	report-----
	circuit applications-----20687	Armed Forces dependents, deceased, provide at Government expense, report-----10252
9550	procurement, military designed when commercially designed equivalent was available at less cost, Navy Dept., GAO report-----12493	bales of cotton, transporting with large clamp trucks-----20901
18697	transistorized VHF design for spacecraft applications-----13215	census, 1963-----
	see also Transceivers (radio).	advance and/or preliminary reports-----
	Transsonic, lightweight system-----18857	passenger transportation survey-----17079-81, 21027
	Transpiration:-----	truck inventory and use survey-----17082-83
21597	calculation of laminar and turbulent boundary layer around 2-dimensional and axisymmetric bodies with suction or blowing-----21910	advance area reports, truck inventory and use survey, announcement and order form-----19284
20688	through angled slots, effects on development of turbulent boundary layer-----21909	hearings-----8391
20608	Transplantation (physiology):-----	civilian personnel, temporary duty, general information, etc., Air Force pamphlet-----60
19957	bone marrow, state of hemopoietic tissue in acute radiation sickness, USSR study-----14502	code of Federal regulations-----4713, 6682, 8563, 10533
14818	effect of bone marrow transplantation on dogs with acute radiation sickness, humoral component, USSR study-----4905	Communist China, translations-----914, 939, 986, 1110, 1185, 1222, 2575, 2613, 2722, 2794, 2838, 2927, 4934, 4957, 4991, 5061, 5241, 5262, 5352, 5391, 6946, 6988, 7029, 7050, 7105, 7312, 8944, 9142, 10906, 12602, 12659, 12744, 12820, 13019, 14531, 14548, 14641, 16316, 18397.
11368	lyophilized tendon homotransplantation in flexor digitorum profundus lesion at carpal articulation level-----21445	defense traffic management handbook-----6540
15001	skin homotransplants-----	DSA civilian career program-----21252
13197	preserved by various means, criteria of biological evaluation, USSR study-----20005	economics, monthly comment-----4000
18193	rabbits, possibility of prolonging life span by means of alkylating substances-----10916	Federal agencies, GAO guidance manual-----3552, 8704, 21331
13215	transplantation of organs of the body, USSR study-----21541	government supplies, common shipping faults and their remedies-----1635
9603	Transplants, see Grafting (physiology).	gravity model, calibrating and testing with small computer-----5669
949,	Transponders:-----	house trailers and mobile dwellings of members of uniformed services, increase allowances-----15799
2915,	communication satellite, traveling wave tube re-entrant amplifier aerodynamic system-----14846	hearing-----17265
9093,	prototype lunar transponder-----19157	law-----10250, 12100, 14117
16147,	Transport aircraft, see Aircraft.	reports-----
18512	Transport airplanes, see Airplanes.	importance to our national economy (remarks)-----8186
	Transport equations, see Equations.	industry or public service?-----14539
1018	Transport numbers, high-temperature transference numbers in pure and mixed aqueous electrolytes-----8799	industry, prospects for bright future (remarks)-----19358
1059	Transport of chemically reacting species in classical capillary-----3025	journey to work, commutation streams, etc-----1826
1139	Transport properties, hydrogen-oxygen system-----18727	land, radio services, FCC rules and regulations-----8534

# INDEX 1964

Transportation—Continued	Entry	Transportation—Continued	Entry
lines—		USSR—Continued	
Atlantic, Gulf, and Pacific		translations	1051
Coasts	6596	1314, 2844, 4886, 5367,	8888,
Great Lakes system, 1964	14210	8978, 9022, 9201, 9272,	10891,
Mississippi River system and		12685, 14460, 14503,	14534,
Gulf Intracoastal Waterway	21280	16234, 16299, 16463,	19905,
local transit operating employees,		20043, 20149, 20173,	20227,
union wages and hours	11285	21578.	
maritime cargo, future horizons (re-		unified deepwater system	16189
marks)	18654	see also Air carriers—Freight rates.	
marketing and transportation situ-		Transportation and Facilities Divi-	4187
ation	3709	sion, AMS publications, list.	
mass transit systems receiving Fed-		Transportation Corps, Army, trans-	
eral aid, study of feasibility of		portation services at continen-	
user taxes—		tal U.S. (CONUS) installa-	19222
law	17412	tions, technical manual	
reports	15700, 17616	Transporters, see Cargo carriers.	
migratory bird regulations, 1964—		Transuranium elements, and chem-	19229
65	15925, 19734	istry of uranium	
military departments method of		Trapezoidal illusion, see Distortion.	
shipping automobiles of Armed		Trapping turtles, general informa-	15918
Forces personnel to and from		tion	
Alaska, amend United States		Traps, see Bird traps.	
Code—		Traumas, see Injuries.	
hearings	13989, 17866	Traumatism, all-Union conference of	
report	13943	traumatologists-orthopedists,	12883
mineral fertilizers and chemicals,		resolution, USSR	
transport problems, USSR		Travel:	
studies	5069	air accommodations, 1st class, Ca-	
motor vehicles of Govt. employees		anal Zone Government and Pan-	
in Alaska—		ama Canal Co., personnel, GAO	10598
law	6177	report	
report	4547	allowances, improper and unnece-	
national defense, strengthen and		sary payments to crew mem-	
improve (remarks)	10130	bers of U.S.S. Kitty Hawk by	
national policy for prosperity and		Department of Navy, GAO re-	
defense (remarks)	19359	port	10602
network, characteristics, determina-		allowances under canceled, etc., or-	
tion by method of successive		ders, authorize—	
analysis of variations, USSR		hearing	6496
study	4921	law	1967
ocean—		report	2212
promoting world trade (re-		Americans-at-home program (sum-	
marks)	21301	mary of remarks)	5739
understatement of claims against		attitude of potential travelers to	
United Arab Republic and		USA	3181
Yugoslavia for recovery of ex-		authorization—	
cessive costs financed by Com-		Agriculture Committee, House,	13960
modity Credit Corporation, Agri-		report	
culture Dept., GAO report—	8733	Judiciary Committee, House, re-	2064, 8340
PACAF basic bibliographies	9982	ports	
passenger transportation survey,		Public Works Committee, House,	8341
advance and/or preliminary re-		report	
ports	17079-81, 21027	civilian, temporary duty, general in-	
problems, mathematical solutions	5233	formation, etc., Air Force	
proceedings of ICC, rules of evi-		pamphlet	60
dence discussed	6873	expense act of 1949, amend—	
publications, price list	18886	hearing	17649
pupl. State supervisors, directory	4647	law	17397
radioactive materials	11855	reports	15528, 17747
reference data, field manual	4281	expenses of Navy Dept. employees	
services at continental U.S. instal-		assigned to California offshore	
lation, Army, technical man-		islands—	
ual	19222	hearing	17649
State and regional defense airlift		law	17397
planning	17969	reports	15528, 17747
statistics in United States, 1962	880,	expenses, rules for deducting from	
2466, 4091, 4881, 6874, 8844,	12573	income tax	2448
traffic assignment manual for appli-		information and travel tips, pass-	15095
cation with large, high speed		port do's and don'ts	
computer	15073	information for Chinese going to	
transportation series, Engineer		Communist China from Hong-	
Corps	6596, 14210, 21280	Kong and Macao	9319
Tunisia, history before and after		military personnel dependents, im-	
reform	13007	proper payments, GAO report	6767
urban mass transportation act of		national—	
1963—		1st 6 months of 1963	17079
law	13913	summer months, 1963	17080
report	12057	4th quarter 1963, and annual	
USSR—		summary	17081
mineral fertilizers, organizing	10825	passenger, between U.S. and foreign	
railroad and motor-vehicle devel-		countries	3970, 4829, 12537
opments	2856, 8846	plant tours, international visitors	
		to United States	7826

# JANUARY-DECEMBER

Entry	Entry
	Travel—Continued
1051, 8888, 10891, 14534, 19905, 20227,	regulations of State Dept., viola- tions by U.S. citizens, hear- ings ----- 416, 2127
16189	see U.S.A., new world of great outdoors ----- 20867
4187	tourist attractions in America (re- marks) ----- 11976
19222	travel service center in Henryetta, Okla., economic feasibility, ARA study ----- 11820
19229	visit U.S.A., bridge of understand- ing (address) ----- 13821
15918	visit USA program (remarks) ----- 5740
12883	Travel Service, United States, see United States Travel Service.
10598	Travelers:
10602	foreign visitor programs, Educa- tional and Cultural Affairs Bu- reau ----- 7768
6496, 1967, 2212	overseas visitor survey, Honolulu International Airport, Nov. 1962 ----- 11673
5739	Traveling-wave tubes, see Tubes.
3181	Travis, Herman, mobility and work- er adaptation to economic change in U.S. ----- 5418
13960	Trawls and trawling:
4, 8340	beam, shrimp and otter trawls, scope ratio-depth relation- ships ----- 14268
8341	John N. Cobb pelagic trawl devel- opment ----- 4730
60	utilization of otter-trawl shrimp vessels in Gulf of Mexico, 1959-61 ----- 14271
17649, 17397, 17747	Trayfors, William M., relief ----- 2142
17649	Trease, B. David, Spanish basic course, units 46-55 ----- 15105
17397	Treasure maps, see Maps and charts.
17747	Treasury:
2448	code of Federal regulations ----- 8574
15095	daily statement ----- 3401
9319	decisions—
6767	Jan.-Dec. 1962 ----- 1644
17079, 17080	weekly ----- 4094
17081	tax and loan account balances, list of banks holding ----- 10239
12537	Treasury bonds, see Bonds of United States.
7826	Treasury Department:
	appropriations, 1964, deficiency, hearings ----- 10285
	appropriations, 1965—
	hearings ----- 6341, 12251
	law ----- 17251
	reports ----- 8297, 14048, 15497
	appropriations, 1965, decrease ----- 12172
	bulletin ----- 4093
	dealings with foreign currencies, operations and policy (state- ment) ----- 1642
	department circulars ----- 3176, 5727-29, 9860, 11668-670, 13499, 15139-140, 19002-7, 21912.
	public debt series ----- 5730-31, 7820- 21, 9861, 11671-672, 16897-900
	foreign exchange operations—
	and gold pool ----- 8588
	Mar.-Aug. 1964 ----- 17990
	law enforcement agencies, career opportunities ----- 9863
	press releases ----- 3927
	report, 1963—
	departmental edition ----- 13498
	document edition ----- 12026
	sale of U.S. obligations directly to Federal reserve banks, ex- tend authority—
	hearing ----- 13996
	law ----- 13893
	reports ----- 12092, 14059

Entry	Entry
	Treasury Department—Continued
	tax and loan accounts, establish more equitable arrangement be- tween Federal Government and commercial banks, GAO report. ----- 4760
	Treasurer of United States financial statements, 1963, GAO exami- nation ----- 19753
	Treasury enforcement agents, general information ----- 16902
	Treasury notes:
	3% percent—
	series C-1966 ----- 16900
	series D-1965 ----- 7820, 9861
	4 percent—
	series A-1966 ----- 7821
	series E-1955 ----- 11671
	Treaties:
	general interest, summary, 88th Congress ----- 21218
	in force, list ----- 5710
	limit treaty-making powers, falla- cies and dangers of proposed Liberty amendment ----- 4519
	print as Senate document, report Republican report, 88th Congress, 1st session ----- 2133
	Soviet, listings ----- 12275
	treaties and other international acts series ----- 1604-22, 3147-62, 4095, 5699-5709, 7774- 99, 9808-38, 11626-644, 13467- 481, 15107-127, 16874-880, 18962-986, 20823-845, 21881- 893.
	treaties and other international agreements—
	1962 ----- 5711, 7800
	1963 ----- 7800
	see also names of countries.
	Treatment of undiluted human waste by activated sludge process ----- 19146
	TREC reports ----- 13493-497
	Trecker, Harleigh B., group services in public welfare, guides for administration and program de- velopment ----- 19666
	Tree nuts, see Nuts.
	Tree planting:
	southwestern Wisconsin, early sur- vival of planted trees by spe- cies, age classes, and site fac- tors ----- 774
	tree planters' notes ----- 791.
	8702-3, 12483-484, 14335, 21330
	Index ----- 12483
	see also Forest planting.
	Tree seeds, see Seeds.
	Trees:
	Alaska, volume tables ----- 2375
	chemical control ----- 20918
	common trees of Puerto Rico and Virgin Islands ----- 16945
	control, pinyon-juniper type of Ari- zona ----- 16969
	dealers in seeds and planting stock, directory ----- 791
	decay, list of publications ----- 6740
	forest—
	increasing value and volume by better growth rate ----- 2360
	site preparation, what do you mean? ----- 14318
	their beauty and use ----- 7938
	identification of species on large- scale panchromatic and color aerial photographs ----- 15207
	nursery products, production and sales, 1962 and 1963 ----- 15130
	protecting against damage from con- struction work ----- 20910
	protecting forest trees and their seed from wild mammals ----- 8684
	ring shake associated with sap- sucker injury ----- 786



# INDEX 1964

	Entry		Entry
<b>Trees—Continued</b>		<b>Trophies:</b>	
shelterbelt species under dryland culture, Central Great Plains—	4221	National Guard Association, Pershing trophy, National Guard (State) trophy, announcement of winners, pamphlet—	21788
species trials at Waiakae Arboretum, Hilo, Hawaii—	8687	National Guard Bureau—	
specific gravity estimating, increment core sampling methods, comparison—	8692	Eisenhower trophy to outstanding unit of company size, announcement of winners, pamphlet—	20645
STX, Fortran 4 program for estimates of populations—	18083	indoor rifle matches, postal, announcement of winners, pamphlets—	18812, 21780
windbreaks for central Great Plains—	5815	National Rifle Association, indoor rifle tournament, announcement of winners, NGB pamphlet—	20644
see also Christmas trees—Hardwoods—Tree planting—also names of trees.		<b>Tropical Botanical Garden, see Pacific Tropical Botanical Garden.</b>	
Tregub, Burton G., simulation of helicopter and V/STOL aircraft, computational methods digital—	21827	<b>Tropical fishes, see Fish and fisheries.</b>	
Trematodes, <i>see</i> Flukes.		<b>Tropical Forestry Institute, annual report, 1963—</b>	19746
Trentanove, Eleonora, <i>see</i> Vasconi, Eleonora.		<b>Tropopause, definition and hourly fluctuations—</b>	10154
Trenton, N.J.:		<b>Troposphere:</b>	
Delaware River water quality—	19803	real-time compensation for tropospheric radio refractive effects on range measurements—	20530
occupational wage survey—	9460	turbulent inhomogeneities, scattering of electromagnetic waves by, USSR study—	971
Treponematoses, world forum on syphilis and other treponematoses, proceedings—	11567	upper, over Transcaucasia, synoptic processes and turbulence, USSR study—	20052
Tress, Jack E., inorganic reactions in high-gamma radiation flux—	7458	<b>Trouble shooting:</b>	
Treutlen County, Ga., soil survey—	13458	evaluation of strategies, NAVTRA-DEVCON technical report—	11493
Triaxial balancing techniques, study of spacecraft balance with respect to multiple axes—	9578	systematic, electronic equipment, training manual—	13321
Triaxial method for determining elastic constants of stress relief cores—	16640	<b>Trout:</b>	
Tribollum castaneum, <i>see</i> Beetles.		cuthroat—	
Tribollum confusum, <i>see</i> Beetles.		bibliography—	21317
Trichoptera, <i>see</i> Flies.		chronic effects of DDT—	10570
Trilodothyrone, <i>see</i> Liothyronin.		feeds and feeding—	4728, 12423
Trilinear chart of nuclides, revision sheet—	4096	lake, general information—	15920
Trilobites:		<b>Troy, N.Y.:</b>	
fossils in Ordovician tuffs, northeastern Maine—	14338	occupational wage survey—	14695
Nevada, Lower Cambrian fauna—	21356	water resources—	4806
Trimble, George R., Jr.:		<b>Truck crops, see Market gardening.</b>	
cull development under all-aged management of hardwood stands—	788	<b>Truck tractors, see Tractors.</b>	
what happens to living cull trees left after heavy cutting in mixed hardwood stands?—	8648	<b>Truck trailers, see Trailers.</b>	
Trinity County, Calif.:		<b>Truckee Meadows area, Nev., hydrogeology and hydrogeochemistry evaluation—</b>	18151
geology of French Gulch quadrangle—	8754	<b>Trucking, see Motortrucks in freight service.</b>	
proposed Whiskeytown-Shasta-Trinity national recreation area, report—	1535	<b>Trucks:</b>	
Trinity Dam:		clamp, used in transporting bales of cotton—	20901
reservoir, name Clair Engle Lake—	21154	Federal use tax on—	19820
law—	17626, 17844	inventory and use survey—	
reports—		advance and/or preliminary reports—	17082-83
Tripartite organic cooled heavy water reactor meeting, Santa Monica, Calif., June 11-13, 1962—	127	advance area reports, census, 1963, announcement and order form—	19284
Tripolitania, Sirte area, United Kingdom of Libya, ground water—	6824	<i>see also</i> Motortrucks.	
Trips, <i>see</i> Travel.		<b>True, J. C., soil survey report, Williamson County, Tenn—</b>	20806
Tri-State Regional Conference on Industrial Modernization, Pittsburgh, Pa., proceedings, Jan. 9, 1964—	11881	<b>Truman, Harry S.:</b>	
Trites, David K., air traffic control specialists, predicting performance—	13783	remarks and responses by members of Senate on his 80th birthday—	15611
Tritium, tracer techniques, use in studies of gasoline storage stability—	7450	print as Senate document, report—	15685
Troitskiy, V. S., lunar radio emission, physical state and nature of moon's surface—	14011	<i>see also</i> President of United States.	
Troop topics, <i>see</i> Army.		<b>Trust funds, see Trusts and trustees.</b>	
Troops, <i>see</i> Army.		<b>Trust Territory of Pacific Islands:</b>	
		administration, report to United Nations—	11624
		claims of residents—	
		law—	17344
		report—	21226

# JANUARY-DECEMBER

Entry	Entry	Entry
Trust Territory of Pacific Islands— Continued		
economic and social development, promote—		
law	17346	
report	21227	
High Commissioner, report, 1963	10671	
Trustees in bankruptcy, powers, amend bankruptcy act, re- port	14079	
Trusts (Industrial):		
antitrust laws—		
administration, investigation—		
authorization, report	6449	
expenses, report	17808	
chainstore violations, investiga- tion by FCC, authorize, hear- ings	10415	
investigation, professional boxing, hearings	14150	
price discrimination legislation, hearings	14149	
selected references, list	2941	
sports, limit applicability— hearings	10428	
report	15758	
Western Europe, cartelization	16872	
Trusts and trustees:		
District of Columbia, testator to add properties to existing trusts—		
law	1921	
report	483	
highway trust fund, financial con- ditions and operations, 1963 re- port	6214	
joint industry promotional funds, employer contributions—		
hearings	4494	
report	12094	
legal investments for trust funds in D.C., list	4610, 15834	
social progress trust fund agree- ment with Inter-American De- velopment Bank, protocol	9824	
trust indenture act of 1939, releases, SEC	4097	
see also Charitable trusts.		
Truth in lending act, see Credit.		
Truth needs a lot of telling, remarks.	6124	
Trypsin:		
and ovomucoid in mixed films, force- area study	20710	
and pepsin fragments during auto- lysis and electro-dialysis, struc- ture formation and enzymatic activity, USSR study	7149	
Tryptophan, intertryptophan migra- tion of energy in protein sys- tems, USSR study	9265	
Tryptophan pyrrolase, implication in endotoxin poisoning	4248	
Tsal, Stephen W., structural behavior of composite materials	14784	
Tschermak, Gustav, microscopic prop- erties of meteorites	13449	
Tshombe, N., interview with, on death of Lumumba, Belgium	9121	
TSO series	4684	
TSUS, see Tariff.		
Tualatin project, construction, re- port	17451	
Tubbs, Carl H.:		
artificially constructed mounds show promise in yellow birch regeneration	779	
germination of yellow birch seed following natural stratification in upper Michigan	6746	
root development of yellow birch in humus and sandy loam	780	
Tuberculosis:		
control in United States, report	9714	
epidemiology and statistics, USSR study	16351	
phthisiology, contemporary prob- lems, USSR study	11044	
reported data	18920	
Rumanian Institute of Phthisiology, general information	12807	
scientific research, main trends, USSR	4903	
services, areawide planning of fa- cilities	7689	
vocational rehabilitation opportu- nities for patients	7835	
Tuberculosis in animals:		
eradication in cooperation with States, summary	4064	
eradication, State-Federal coopera- tive program, progress re- port	9920, 19054	
Tubes:		
armored, space radiator, hypervelo- city impact damage character- istics	20599	
composite, vacuum-jacketed tubing replaces bellows in cryogenic systems	14806	
connector for vacuum-jacketed lines cuts tubing system cost	13181	
cylindrical, in free-molecule and slip flows, measurements of ef- flux patterns and flow, rates	20606	
Federal item identification guides for supply cataloging	12292	
supplements	3473	
54-meter long, formation of detona- tion waves in hydrogen-oxygen mixtures from 0.2 to 2 atmos- pheres initial pressure	9604	
helical tubing separating nitrogen gas from liquid nitrogen	13171	
identification of tube lines for air- craft, missile and space sys- tems, military standard	21255	
lay-flat irrigation tubing, hydraulic and geometrical relationships	19103	
metal, break-up makes one-time shock absorber	7486	
metal fill, tool facilitates sealing	14810	
numerical solutions of free-molecule flow in converging and diverg- ing tubes and slots	13244	
pushed through draw plate, investi- gation of stresses, USSR study	2809	
self-sealing disconnect for tubing	7482	
sleeve and cutter simplify discon- necting welded joint in tubing	13170	
small straight, heat transfer studies of vapor condensing at high velocities	21736	
strain-cycle phenomena in thin-wall tubing	19232	
torpedo, defective, unnecessary costs incurred in procuring from Youngstown Welding & Engineering Co., by Navy Dept., GAO report	19765	
traveling wave, re-entrant amplifier serrordyne system	14846	
wall temperatures with forced con- vection, internal radiation ex- change, and axial wall heat conduction	9568	
Tubes (inner), see Inner tubes.		
Tubing, see Tubes.		
Tucker, Ernest C., testimony, hear- ings	4594, 8456	
Tucson Magnetic Observatory, mag- netograms and hourly values	4404	
Tuff, see Volcanic ash, tuff, etc.		

# INDEX 1964

Entry	Entry
Tularemia:	
dust vaccine testing, evaluation, USSR study.....	9195
natural focus of flood plain type, structure, USSR study.....	1242
variability, USSR articles.....	10845
Tule Lake National Wildlife Refuge:	
administration—	
law.....	17425
reports.....	2093, 17595
Tulelake, Calif., durum wheat acreage allotments, increase and make permanent, hearing.....	15580
Tuliptree:	
micro-organisms and soil structure affect yellow-poplar growth.....	8671
premium yellow-poplar seedlings, 8 years after planting.....	18050
yellow-poplar cubic-foot volume tables, southern Appalachians.....	8669
Tumors:	
brain, diagnosis with Ural-1 computer, USSR study.....	12716
cell membrane, antibodies to specific antigen, USSR study.....	10801
chemotherapy, USSR study.....	14617
chondrogenesis during long bone regeneration, USSR study.....	2476
cytostatic substances in chemotherapy, USSR studies.....	18550
Ehrlich ascites, resistance, effect of exposure to 2° C.....	7982
Ehrlich's ascite carcinoma, effect of sarcolysin on life cycle.....	9322
fluorine, irradiation, and tumors, USSR study.....	18581
malignant neoplasms, age-adjusted and age-specific death rates, 1960.....	15041
oncogenic properties of viruses, problems, USSR study.....	16559
proteins, USSR study.....	18249
upper respiratory organs, classification, USSR studies.....	14516
USSR studies.....	14521
Tuna fish:	
firms canning, list.....	740
northeast Pacific albacore oceanography survey, 1961.....	4741
skipjack tuna, monofilament gill net fishing in Hawaiian waters, 1961-62.....	15916
tunalike fish, firms canning, list.....	741
Tung, C. C., effect of runway unevenness on dynamic response of supersonic transports.....	21732
Tung Chi-Ping, Chinese defector, testimony.....	21241
Tungans, minorities in Soviet Central Asia and Kazakhstan.....	20069
Tungsten:	
alkali metal atoms—	
adaption of atom-atom interaction theory to adsorption.....	18759
atom-metal interaction theories, application to adsorption.....	18758, 18784
arc-melted, effects of purity and structure on recrystallization, grain growth, ductility, tensile, and creep properties.....	21776
carbon determination of less than 10 parts per million.....	21754
cesium on tungsten, thermal desorption and surface diffusion, field-emission, investigation.....	5500
low temperature tensile properties, effects of interstitial impurities.....	14851
mineral industry survey, monthly.....	4098
minerals yearbook chapter.....	20516
Montana, western, resources.....	2996
Tungsten—Continued	
niobium-tungsten-zirconium ternary system, USSR investigation.....	4907
parallel plates, laminar and turbulent flow of hydrogen over, heat transfer and friction coefficients.....	18763
plasma-sprayed, and stainless steel substrate, analysis of bonding mechanism.....	20593
thick coatings, preparation.....	13130
vapor deposition on MERM rocket nozzles.....	13135
see also Scheelite.	
Tungsten carbide, heats of combustion and formation.....	5484
Tungsten hexachloride, vapor pressure by metal diaphragm technique.....	9500
Tunisia:	
agricultural commodities, agreements.....	7785, 13467, 18983
agriculture, organization, production, and trade.....	8472
economy, basic data.....	6845
education, commission for educational exchange and financing programs, agreement.....	7786
enters era of solar energy.....	5079
fact sheet.....	1594
gazetteer, official standard names.....	18100
transportation, history before and after reform.....	13007
Tunnel diodes, see Diodes.	
Tunnels:	
engineering, museum treatment.....	21800
heat-tunnel, effects on shrink-film-wrapped lettuce.....	36
permafrost, in Tuto area, Greenland.....	10487
vehicular, locate under certain parts of Capitol grounds and Botanic Garden grounds, authorize—	
hearings.....	12280, 15821, 17664
law.....	15398
reports.....	10224, 12065, 14092
Tupes, Ernest C., normative distributions of AQE aptitude indexes for high-school-age boys.....	19162
Turbine fuel, aviation fuels, petroleum products survey.....	9497
Turbines:	
and components, Federal item identification guides for supply cataloging.....	12289
supplements.....	3470
Brayton cycle space-power system applications, analytical studies.....	20610
gas—	
Army overland train Mark II, dust concentration measurement.....	16894
in aircraft propulsion, USSR study.....	11169
steels and alloys used in building, welding operations, USSR study.....	14441
generator set 2000-KW-AC, technical manual.....	7730
hydraulic—	
index of hourly earnings, selected establishments.....	3587
price indexes for materials, quarterly release.....	3589
three stage 4.54-inch-mean-diameter reverse-flow reentry design, experimental investigation.....	1475
two-stage, effect of stage spacing on performance.....	13240

Entry	Entry	Entry
	<b>Turbulence:</b>	<b>Turtles, trapping, general informa-</b>
	atmospheric—	tion-----15918
4907	dynamic response of airplanes-----13257	Tussock moths:
	power spectral measurement in	Douglas-fir, description, control-----14300
	severe storms and cumulus	mortality and growth reduction of
	clouds-----20596	white fir following defoliation
18763	boundary layer wall-pressure fluctu-	by Douglas-fir tussock moth-----12478
	ations and pressure-velocity	Tuto, Greenland, tunneling in perma-
	correlations-----9614	frost-----10487
20593	diffusion in surface layer of earth's	Tuve, R. L., vapor-securing agent for
13130	atmosphere, USSR studies-----11110	flammable-liquid fire extin-
	flight, urinary catecholamines-----1742	guishment-----13344
13135	intensity of deep turbulent exchange	Tuzigoot National Monument, general
	in Atlantic Ocean, results of	information-----14981
	direct determination, USSR	TVA, see Tennessee Valley Authority.
	study-----12745	Tvardovskiy, A., Terkin versus Ter-
5484	radar measurements, in free pure	kin, critique of poem-----1089
	atmosphere, USSR study-----18389	Twenter, Floyd R., geology and
9500	scattering of electromagnetic waves	ground water in Verde Valley-----2419
	by turbulent inhomogeneities	Twiford, Don D., physical facilities for
	of troposphere, USSR study-----971	guidance services-----8480
18983	severe storm, measured char-	Twin Falls County, Idaho, ground-
	acteristics-----11700	water reconnaissance of Sailor
8472	upper troposphere over Trans-	Creek area-----15944
6545	caucasia, USSR study-----20052	2-(4'-amino-5'-azamethenyl pyrimidyl)-3 pentene-4-ol, molecular
	Turbulent flow, see Flow.	structure-----19174
	Turf, see Sod.	2,4-D, see Dichlorophenoxyacetic acid.
7786	Turing calculators, see Electronic	2,4-DP, controlling cane cactus
5079	computers.	plants-----12468
1594	<b>Turkey:</b>	Two-stage emitter follower is temper-
18100	bibliography of social science period-	ature stabilized-----13193
	icals and monograph series,	Tyler, Nancy C., testimony, hearings-----8456
	1950-62-----8133	Typewriter ribbons, see Ribbons for
13007	foreign trade regulations-----14376	typewriters, etc.
	investment factors-----2459	Typewriters, current industrial re-
	Iran boundary, study-----7766	ports-----3390, 6046
21800	Iraq boundary, study-----7765	see also Ribbons for typewriters,
	labor conditions-----1385	etc.
36	labor law and practice-----5430	Typewriting, repro typing and layout,
	present day, Turkish Communist	for contractor reports for
	view-----9240	NASA-----16665
10487	selling in Turkey-----21072	Typhoid fever, prophylaxis, Rumanian
	southern, sailing directions-----7632	study-----9266
	trade in cotton textiles, agreement-----18982	Typlists:
	U.S.S.R. boundary, study-----7767	career opportunities in General
17664	<b>Turkeys:</b>	Services Administration-----795
15398	breeder hens, 1964, hatching sea-	employment outlook-----9418
14092	son intentions-----3165	examinations-----
	national improvement plan-----	announcement-----206, 6102
19162	distribution by States and	copying from plain copy, test
	varieties-----1684	exercise exhibit-----6092
9497	hatcheries, dealers and inde-	Federal, what it is and how
	pendent flocks, participants-----5797	given-----1845
	hatchery and flock participation,	sample questions-----212
	tables-----1683	simplified test, exhibit-----6095
	performance test, 1963-----1685	instructions for typing manuscripts
12289	proposed changes-----9926	to be printed at GPO-----4736
3470	tested by official State agencies,	opportunities in Washington, D.C.-----11566
	monthly report-----4099	Typography, see Printing.
	Turkish tobacco, see Tobacco.	Tyrrell, Miles E., preparation and
20610	Turley, William R., YHU-1D category	evaluation of diborides-----11318
	1 performance, stability and	
	control tests-----7968	<b>U</b>
	Turnbow, James W., troop seat in-	U-10B, see Airplanes.
	stallation in H-21 helicopter-----7818	U.A.R., see United Arab Republic.
16894	Turner, Frank, terrain roughness-----15138	U.S.A.F.I., see Armed Forces Insti-
	Turner, Frederick B., food-chain re-	tute.
11169	lationships of iodine 131 fol-	U.S.A.P.R.O., see Army Personnel Re-
	lowing 2 nuclear tests in	search Office.
	Nevada-----123	U.S. Antarctic Projects Officer, bul-
14441	Turner, Theodore L., ammoniacal-	letin-----3285
	ammonium carbonate leaching	U.S.D.A., see Agriculture Department.
7730	of manganiferous materials	U.S. National Commission for
	from southern district, Aroos-	UNESCO newsletter-----4104
	took County, Maine-----7446	U.S.-owned foreign currencies, hear-
3587	Turner, Thomas R., boundary layer	ings-----6356
	control by blowing on	U.S.S.R., see Union of Soviet Socialist
3589	NACA65-424 airfoil to effect	Republics.
	drag reduction-----16692	U.S. Study Commission, Southeast
	Turner watercolors from British	River Basins: 1964, public
	Museum-----3056	appropriations, 1964, public
1475	Turnover of labor, see Labor turn-	works-----1984
	over.	law-----1984
13246	Turpentine, see Naval stores.	reports-----343, 510, 4458



# INDEX 1964

Entry	Entry
UAR, <i>see</i> United Arab Republic.	Un-American activities:
Ubieta, Victor M., relief-----	subversive labor organizations,
Udall, Stewart L.:-----	abuse of tax exemptions-----
addresses, etc.-----	hearings-----
Nov. 9, 1963-----	report-----
Nov. 11, 1963-----	<i>see also</i> Communism-----
Oct. 1, 1964-----	Un-American Activities Committee,
Udell, Gilman, G.:-----	House:
civil service classification and sal-	annual report, 1962, print addi-
ary laws, v. 2-----	tional copies, reports-----
laws relating to civil service retire-	annual report, 1963-----
ment-----	committee print-----
Ufa Order of Lenin Oil Refinery,	hearings-----
25th anniversary-----	investigations and studies, ex-
Uganda:-----	penses, report-----
do business in, trade mission re-	report-----
port-----	Unangst, John R., determining nodal
gazetteer, official standard names--	arrival times at moon from
-----	precessing near-earth parking
UH-1B, <i>see</i> Helicopters.	orbits-----
UH-1D, <i>see</i> Helicopters.	Unconventional warfare, special bib-
UHF telemetry concept study-----	liography series-----
Uigurs, minorities in Soviet Central	Underdeveloped areas:
Asia and Kazakhstan-----	conducting labor force survey in
Ukr SSR, <i>see</i> Ukrainian Soviet Social-	developing countries-----
ist Republic.	French foreign aid to underdevel-
Ukrainian Soviet Socialist Republic:	oped countries, wasted or pro-
Academy of Sciences-----	ductive?-----
and its sections-----	role of abundance in assisting de-
-----	veloping nations (address)-----
candidate report-----	Soviet and Communist Chinese
-----	policy towards underdeveloped
candidates for membership-----	countries, list of publications--
Marine Hydrophysical Institute,	-----
activities-----	Underemployed, <i>see</i> Unemployed.
Microbiology Institute, problems--	Undergraduates, <i>see</i> Students.
reports, translations-----	Underhill, A. Heaton, remarks, Nov.
research activities information-----	9, 1964-----
artificial diamonds in industry-----	Underwater research, <i>see</i> Oceanogra-
capital construction-----	phy.
construction, news items, 1959-61--	Underwear, knit, current industrial
cybernetics, developments-----	reports-----
geophysicists and astronomers,	Underwood, J. C., quick test of buddy
work, 1960-62-----	flavor in maple sirup-----
scientific research, plans, 1964-65,	Unemployed:
summaries-----	accelerated public works program,
scientists and scientific organiza-	maximum grants-in-aid for ell-
tions-----	gible areas-----
Uniate Church, anti-Soviet activi-	anatomy of unemployment (ad-
ties-----	dress)-----
Ulbricht, Walter, speech, Nov. 1963--	apprenticeship and unemployment--
Ulcers, peptic ulcers, treatment-----	area redevelopment approach to
Ullman, Morris B., cities of mainland	problems (address)-----
China-----	characteristics of urban depressed
Ultrasonic waves, <i>see</i> Sound.	areas-----
Ultrasonics, <i>see</i> Sound.	disadvantaged girls 16-21 years
Ultraviolet light, <i>see</i> Light.	old-----
Ultraviolet rays:	displaced workers, case studies, ex-
nature of ultraviolet luminescence	periences after layoff-----
of cells, USSR study-----	eliminate unemployment through
radiance of earth and its limb-----	education (remarks)-----
Ultraviolet spectrum, <i>see</i> Spectra.	family characteristics of claimants
Umatilla River, geology and ground	under temporary extended com-
water of basin-----	pensation program, 1961-62-----
Umbrellas and parts of umbrellas, ex-	Federal employees, financial pro-
cept handles, Tariff Commis-	tection-----
sion report-----	geographic mobility and employ-
Umiat oil field:	ment status-----
sell crude oil for drilling, mechan-	household statistics, concepts and
cal, and heating operations in	methods used-----
nearby areas-----	how Government measures unem-
hearings-----	ployment-----
law-----	human and natural resources of Na-
reports-----	tion, conserve, hearing-----
Umstead, M. E., submarine atmos-	Indians, American-----
phere studies aboard USS	labor force monthly report-----
Sculpin-----	manpower development and train-
Umstott, Haven D., Public law 480	ing act-----
and other economic assistance	amendments, explanation-----
to United Arab Republic	amendments of 1963-----
(Egypt)-----	hearings-----
UN, <i>see</i> United Nations.	law-----
Unalaska Island, Sitka spruce planted	reports-----
in 1805, history-----	as amended, text-----
	explanation-----

# JANUARY-DECEMBER

Entry	Entry	Entry
	<b>Unemployed—Continued</b>	<b>Unemployment insurance—Con.</b>
	manpower development and training act—continued	role of employment security in active manpower policy (address)-----
15811	occupational mobility, through MDTA training-----	7363
17883	programs for disadvantaged groups-----	
	11246	State laws-----
17820	regulations for administration-----	21276
15577	research and training, report-----	significant provisions—
8403	manpower resources of Nation, training and utilization, hearings-----	Nov. 15, 1963-----
1125-27	543, 2247, 4589	4659
	14200	Jan. 1, 1964-----
6312	merchandising your job talents-----	6584
15577	national attitudes toward unemployment (paper)-----	State salary ranges of positions in employment security, etc-----
	2072	10667, 19807
	national program of public work, should Federal Government establish? national college debate topic 1964-65-----	8498
18770	19450	
20934	neighborhoods-----	tax rates by industry, 1962-----
	2968-68	temporary extended unemployment compensation act of 1961, family characteristics study-----
	problem of unemployment (remarks)-----	4656
	7362	temporary unemployment compensation act amounts restoration, revise law-----
	reduce unemployment through acceleration of State and local public works-----	law-----
21668	areas eligible for immediate public works assistance, list-----	253
11022	413	report-----
7943	hearings-----	unemployment insurance review (periodical)-----
	2092	8504
	schools in areas of substantial unemployment, financial assistance, provide, hearings-----	unemployment insurance statistics (periodical)-----
9783	17884	8505
	12012	women, Social Insurance and Taxes Committee report-----
	14663	1545
	21274	Unfair commercial activities, hearings-----
21829	unemployed-parent segment of aid to families with dependent children-----	17656
	4105	Unfunded private pension plans-----
3391	unemployment among full-time and part-time workers-----	13070
1687	21678	Uniate Church, anti-Soviet activity in Ukraine, USSR study-----
	18646	16491
	unemployment and employment in nuclear scientific era (paper)-----	UNICEF, see United Nations International Children's Emergency Fund.
11818	13087	Unified action Armed Forces (UNAAF)-----
	3433	4882-83, 6876, 8845
	2973	Uniform commercial code, see Commercial law.
	15255	Uniform time legislation, hearings-----
11267	work history-----	19514
11816	attitudes, and income-----	Uniformed services, see Armed Forces.
	7418	Uniforms:
5926	7420	furnishing in lieu of paying cash allowances to employees, Veterans' Administration, need for effective management action to achieve substantial savings, GAO report-----
7416	see also Unemployment insurance.	19759
16926	Unemployment, see Technological unemployment—Unemployed.	Marine Corps regulations, changes-----
16610	Unemployment compensation, see Unemployment insurance.	722
14665	Unemployment insurance:	18850
4656	appropriations, 1964, supplemental-----	Navy regulations, 1959, change-----
11945	law-----	Reserve officers, maintenance allowance, to combine service in more than one reserve component in computing 4 years of Federal service to qualify-----
13074	8234	hearing-----
16589	report-----	19591
9472	benefit series service-----	19432
19604	claims-----	reports-----
837	4106	13942, 17849
3745	coverage of wage and salary workers-----	wear resistance of military textiles-----
7354	4661	13430
397	employer's tax guide-----	Union lists of serials, bibliography-----
1943	employment, etc., of covered workers-----	20453
48, 4527	3434	Union of Soviet Socialist Republics:
13026	employment security review-----	abstract journal, biology, zooparasitology-----
21655	exhaustees, surveys-----	2873-75
	4656	academies of sciences-----
	3599	activities, 1962-----
	labor market and employment security-----	10972
	3637	information on-----
	3638	8934
	special issues-----	news-----
	3434	2757
	railroad act, text as amended, 1963-----	Academy of Medical Sciences-----
	11591	candidates, list-----
	railroad employees, RRB administrative rulings-----	929
	15074	1020, 1097
	1589	Pharmacology Division of Institute of Experimental Medicine, work on neuropharmacology-----
	restoration of temporary unemployment compensation act amounts-----	9190
	5691	vacancies in institutes, announcement-----
		18571
		vestnik-----
		12596, 21519
		Academy of Sciences-----
		activities, 1962-----
		biological investigations-----
		10972
		Botanical Institute imeni V. L. Komarov, work of scientific seminar of section of geobotany-----
		16237
		12993

# INDEX 1964

	Entry
Union of Soviet Socialist Republics—Continued	
Academy of Sciences—Continued	
candidates for active and corresponding members, list.....	18201
coordination conference on growth stimulants, etc.....	21507
Entomological Society activity, 1963.....	19960
general meetings.....	16095, 16483
I. V. Grebenshchikov Institute of Silicate Chemistry, bibliography of works by scientific personnel.....	12994
new additions.....	18521
new departments in operation.....	11128
physiology and biochemistry problems of micro-organisms, studies and plans.....	16204
results and prospects reviewed.....	9193
Scientific Information Institute, organization and activities.....	12648
sessions held by sections.....	11109
Technical Sciences Department—news.....	2592
technical cybernetics, news.....	4962, 8847
vacancies.....	11098
vestnik, translations.....	16395
aerial surveying and geology.....	5387
Afghanistan boundary, study.....	7764
agriculture—	
agricultural applications of plant selection and breeding.....	2683
development, statements of N.S. Khrushchev.....	16520
enterprises, administration.....	9029
specialists criticized, lack of specific assignments.....	16205
translations.....	1074, 2775, 2848, 2882, 4887, 5381, 7089, 7190, 7296, 8997, 10841, 10988, 14572, 18209, 18342, 18416, 18468, 19850, 19888, 20268, 20320, 20334, 21421, 21449, 21624
U.S. Agriculture Exchange Delegation, report, 1963.....	2266, 14173
agrochemistry need.....	18259
all-Union conferences and congresses—	
biochemical.....	18367
chemistry of complex compounds.....	20243
electron microscopy and non-destructive methods of testing.....	2811
epidemiologists, microbiologists, and pathologists.....	19961
geothermic.....	21540
historians, proceedings.....	21613
inorganic glass structure.....	20265
neuropathologists and psychiatrists.....	7236
physical chemistry of molten salts and slags.....	5954
pneumatic-hydraulic automation, 6th meeting.....	7210
radioisotopes, applications in measuring techniques and instruments, reports.....	19228
steelmelters, scientific and technical conference.....	19806
traumatologists-orthopedists, resolution.....	12883
veterinary virology.....	20047
All-Union Mineralogical Society, 1962 activities.....	4949
All-Union Scientific-Research Institute of Medical and Medical-Technical Information, organized.....	2714
All-Union Society of Helminthologists, anniversary session.....	19962
allergy studies.....	18569

	Entry
Union of Soviet Socialist Republics—Continued	
anesthesiology, published literature, 1959-63, survey.....	7293
anthropological studies.....	11104
antibiotics research.....	19835
Arab-Soviet cooperation, growth.....	18327
astronomical research.....	8932
astronomy, new methods in.....	5010
athletic program, analysis.....	18373
atmospherology and geology research.....	1082
automobile tire production, improvement necessary.....	18276
aviation design, new achievements.....	12688
bacteria of layer waters, oils and rocks of oil deposits in USSR, review.....	2589
biochemistry—	
sequential problems.....	21550
studies.....	14569
biographic information, Knunyants, I. L.....	19876
biological control systems research, literature survey.....	10577
biological sciences and radiobiology, development, etc.....	1122
biology, general, studies.....	18549
biophysics research.....	16330
bone grafting studies.....	16397
budgetary and financial problems, articles.....	14626
calculating and communications equipment.....	16113
cardiology in USSR.....	21509
central portion, basic nonmilitary information, Air Force pamphlet.....	7978
chemical industry—	
economics.....	10900
technological progress and industrial hygiene.....	5045
chemical science in higher educational institutions.....	16210
chemiopharmaceutical industry, prospects of development.....	16313
chemization of agriculture, status, etc.....	19895
Chinese and Russian Communists compete for foreign support.....	21241
Chinese provocation on Soviet border.....	955
civil defense and DOSAAF.....	2529
clinical medicine, studies.....	21411
commerce, problems relating to finances.....	12882
communal livestock raising, growth.....	1057
communications—	
industry, new equipment, economic efficiency.....	2679
translations.....	1013, 2843, 5255, 5350, 7220, 11119, 12912, 14526, 16067, 18435, 21463
Communism—	
challenge to U.S.....	1756
scientific, principles and structure, problems.....	4929
Communist indoctrination and medical training of doctors.....	9196
conferences, congresses, etc.....	
automatic teaching.....	14627
biology.....	2498, 9000
hydrobiology of inland waters.....	2841
medical.....	10868
1962, reports.....	1090
medicine.....	2498
metallurgy.....	890, 12608
public health and medical trade union work, news.....	1310

# JANUARY-DECEMBER

Entry	Entry
	Union of Soviet Socialist Republics—
	Continued
7293	construction and building materials
11104	industry, translations..... 1168,
19835	2817, 6952, 8874, 10778, 11208,
18327	12820, 16394, 18349, 20128,
8932	20196, 20201, 20324, 21548.
5010	consular convention, text, etc..... 14028
18373	consumer goods and domestic trade..... 994,
	2703, 2900, 2930, 7124, 7270,
1082	9210, 9279, 10731, 10863, 11028,
	11054, 12882, 12948, 14651,
18276	16248, 18356, 18411, 19945,
12688	20010, 20172, 20190, 20326,
	21488.
2589	consumers' cooperatives, stricter
	control over financial activi-
	ties..... 11054
21550	control systems development..... 10846
14569	copper industry..... 1792
	cosmonauts—
19876	space flight..... 19951
	story..... 19899
10877	training..... 20291
	cotton production, etc., addendum
	credit for bankrupt kolchozes?..... 13597
1122	German study..... 8875
18549	criminology, some aspects..... 10842
16330	cultural relations, exchanges in sci-
16397	entific, technical, educational,
	cultural and other fields, agree-
14626	ment..... 15118
	cybernetics, technical develop-
16113	ments..... 2556
21509	defection of Russian seaman, rea-
	sons, testimony, hearing..... 2125
7978	development of feelings and con-
	science in Soviet society..... 5357
10900	diagnostic radiology, survey of pub-
	lished literature, 1959-63..... 7093
5045	diseases, natural foci, methods for
	developing study in USSR and
16210	abroad..... 12815
16313	dislocation structures studies..... 5295
	documentary films, ideological con-
19895	tent..... 8880
	drug research..... 16364
21241	ecology of marine inhabitants, stud-
	ies..... 7107
955	economic indicators, annual..... 6189
2529	economic information, methods of
21411	improving effectiveness, study..... 9336
	economic regions, new..... 5399
	economic system—
	current developments..... 931,
	1035, 1124, 1215, 1319, 2508,
12882	2621, 2744, 2870, 4885, 4984,
	5103, 5210, 5321, 6936, 7005,
1057	7130, 7217, 7327, 8917, 9058,
	9152, 9269, 10723, 10854, 10942,
	11031, 11134, 11231, 12665,
	12792, 12909, 13005, 14489,
2679	14639, 16051, 16103, 16186,
1013	16276, 16365, 16467, 18192,
11119	18335, 18487, 18544, 19847,
18435	19920, 20114, 20189, 20351,
	21410, 21489.
	structure and policy..... 916,
1756	940, 947, 1205, 1226, 2469, 2485,
	2647, 2785, 2880, 4956, 5018,
4920	5034, 5291, 5385, 6992, 7229,
	8908, 9238, 9355, 10727, 10832,
9196	10971, 10993, 10999, 11069,
	11086, 11101, 11133, 12651,
14627	12706, 12881, 12922, 14450,
498	14533, 16075, 16110, 16136,
9000	16247, 16369, 16414, 16454,
2841	18233, 18279, 18309, 18506,
10868	18564, 19902, 20013, 20038,
1090	20283, 20357, 21556, 21577
2498	economy—
190	Brazilian view..... 9140
12608	many crises, symposium..... 12274
de	problems in working out new 5-
1310	year plan..... 12881

Entry	Entry
	Union of Soviet Socialist Republics—
	Continued
	education—
	and cybernetics, Moscow, May
	1963..... 17918
	English-language materials, bibli-
	ography..... 17923
	improving various areas..... 8868
	methods and aims..... 72284
	pre-school education methods..... 12860
	structure and decision-making..... 6581
	electric power—
	and electrotechnical industries..... 5000
	translations..... 2533, 2626, 4945,
	5088, 6912, 8928, 12605, 12769,
	14427, 16267, 18469, 20089,
	20280, 21420, 21450, 21568
	equalization of astronomic-geodetic
	network, problems..... 12686
	export sales of U.S. agricultural
	commodities to Soviet Union,
	opinion of Attorney General..... 5415
	farm production, 1963..... 8473
	fertilizers—
	liquid nitrogen, utilization..... 9312
	mineral—
	and crop yields..... 10917
	principal types, agricultural ef-
	fectiveness..... 9294
	transportation..... 10825
	field emission research 1960-63, bib-
	liography..... 5550
	financial and budgetary problems,
	articles..... 14626
	fish-catching, fish-breeding, and
	pisciculture studies..... 16283
	fish, studies..... 5380
	fisheries, developments..... 5296
	fishing industry..... 1091
	general studies..... 16259
	postwar expansion..... 12258
	recent developments..... 16348
	5-year plan, problems of develop-
	ment..... 18564
	food products sale structure,
	changes..... 1058
	foreign trade, 1962, statistical sur-
	vey..... 1202
	game waterfowl, reserves at pres-
	ent time and recent past, dis-
	tribution..... 14464
	geophysical research..... 1221
	health protection developments..... 12797
	health-resort science, physiother-
	apy, and therapeutic physical
	culture, studies..... 14462
	helminthology studies..... 1032
	hematological studies..... 16464
	hematology practices..... 11008
	higher education..... 583
	higher educational institutions
	news—
	instrument building series..... 2847,
	5178, 5347
	radio engineering series..... 2500,
	7021, 7308, 9209
	radiophysics series..... 1123,
	5236, 7212, 8863
	hydrometeorology, reorganization..... 11148
	hygiene and sanitation studies..... 19834
	ichthyology, recent developments..... 2590
	index-digest of decisions, 1949-62..... 19745
	industrial development—
	automotive industry..... 1161,
	2494, 2601, 2706, 2928, 5056
	5134, 6995, 7226, 7295, 9083,
	9275, 10949, 12601, 14493, 16029,
	16160, 16168, 16510, 18219,
	18357, 18450, 19853, 19932,
	20023, 20039, 20215, 20281,
	20292.



# INDEX 1964

Entry		Entry	
Union of Soviet Socialist Republics—Continued		Union of Soviet Socialist Republics—Continued	
industrial development—con.		industrial development—con.	
chemical industry-----	900.	regional economy-----	965.
1040, 1076, 1143, 1188, 1325,		999, 1027, 1157, 1208, 1258,	
2572, 2667, 2738, 2823, 2826,		2474, 2486, 2629, 2677, 2776,	
2883, 4985, 4993, 5024, 5058,		2815, 2829, 4896, 4950, 5085,	
5075, 5094, 5119, 5203, 5214,		5099, 5147, 5160, 5174, 5239,	
5220, 6895, 6900, 6927, 7076,		6958, 7078, 8898, 8919, 9120,	
7088, 7116, 8884, 8912, 8926,		9146, 9285, 9304, 9349, 10938,	
8942, 9053, 9075, 9189, 9261,		11120, 12707, 12770, 14432,	
9303, 10768, 10952, 11027, 11111,		14458, 16135, 16161, 16273,	
12729, 14599, 14631, 16019,		16353, 16415, 16465, 18308,	
16104, 16115, 16169, 16252,		18511, 20012, 20186, 20256,	
16337, 16400, 16427, 16468,		20284, 20327, 20414, 21425,	
16546, 18276, 18355, 18379,		21524, 21622,	
18452, 19887, 20041, 20129,		tractors and agricultural ma-	
20144, 20162, 20194, 20200,		chinery-----	926.
21462, 21628,		938, 1194, 1273, 1317, 2574,	
chemical machine building-----	1068.	2635, 2801, 2822, 2836, 2878,	
1204, 2646, 2865, 2911, 4947,		4916, 4953, 5014, 5036, 5052,	
5125, 5329, 7155, 9013, 10752,		5180, 5222, 6967, 7273, 7313,	
11242, 16111, 18210, 19889,		8927, 8937, 8998, 9047, 9175,	
21435,		9268, 10915, 11053, 12609, 12704,	
construction machinery-----	1146.	12777, 12825, 14570, 16021,	
1277, 1311, 2544, 2721, 2917,		16385, 16401, 16511, 18287,	
5048, 5053, 5071, 7180, 7314,		18409, 18432, 19904, 20022,	
8958, 9333, 10732, 12784, 16101,		20042, 20260, 20279, 20282,	
16339, 16426, 18546, 20293,		20306, 20379, 21436, 21501,	
electrical equipment-----	1109.	21643, 21651,	
2521, 2715, 2760, 5062, 5109,		industrial instrumentation prob-	
5118, 5302, 5491, 6938, 7015,		lems-----	2765
7047, 7256, 14652, 16121, 16428,		industry-----	
16512, 16530, 18577, 20184,		employment in industry, compari-	
21607,		son of U.S. and U.S.S.R.-----	10089
ferrous metallurgy-----	897.	heavy, cost of production-----	16356
1072, 1127, 1169, 1316, 1349,		need for improved standards-----	18438
2504, 2835, 2923, 5009, 5050,		use of financial services-----	6966
5067, 5111, 5197, 5221, 5299,		international economic relations-----	1041.
5314, 5331, 5384, 5413, 7133,		5168, 5402, 6923, 8975, 9263,	
8891, 8947, 9134, 9149, 10733,		11039, 11078, 11214, 12954,	
10751, 10896, 10954, 10990,		14518, 16466, 19852, 19929,	
11093, 11138, 11211, 12660,		19938, 20032, 20105, 20325,	
12676, 12839, 12865, 14491,		21479, 21636,	
16002, 16087, 16194, 16225,		inter-relationship between national	
16284, 16306, 16324, 16359,		blood banks and military medi-	
16434, 16556, 18206, 18260,		cal service-----	7064
18408, 18531, 18565, 19971,		ionosphere and geomagnetism re-	
20097, 20267, 20307, 20378,		search-----	993
21427, 21525, 21637,		Iran boundary, study-----	7765
machinery industries-----	997.	irrigation and reclamation discus-	
1022, 1236, 2511, 2541, 2871,		sion-----	14650
2922, 5086, 6906, 6924, 7108,		Israeli tourists visit to Vil'nyus,	
8923, 9148, 9213, 11068, 12603,		Soviet press report-----	20124
12615, 13002, 16017, 16041,		journals, abstracts pertaining to	
16289, 16310, 16367, 16509,		Communist China-----	1043.
18211, 18509, 18538, 20288,		1048, 1064, 1080-81, 1248, 2495,	
20377, 21426, 21460, 21623,		2513, 2525, 2579, 2618, 2651,	
metalworking equipment-----	1075.	2672, 2692, 2820, 2830, 2866,	
1134, 1235, 1259, 2472, 2484,		2868,	
2599, 2705, 2846, 2851, 2854,		Khrushchev's virgin lands policy,	
4951, 5038, 5090, 5133, 5137,		French anticommunist anal-	
5159, 5268, 9164, 9174, 10770,		ysis-----	9092
11113, 11166, 12776, 12903,		Kuwait's international finance	
13001, 14520, 14545, 16134,		role, view-----	18532
16148, 16360, 16433, 16485,		labor, translations-----	1132.
16506, 18258, 18268, 18417,		2650, 2827, 6926, 7230, 10725,	
18585, 19840, 20007, 20231,		10875, 11161, 12695, 12778,	
20341, 20393, 21506, 21591,		16294, 18313, 19928, 20154,	
nonferrous metallurgy-----	2582.	20195,	
2656, 4891, 4990, 5223, 5248,		Lenin prizes-----	
6959, 7097, 9054, 9176, 9236,		attainments, 1964, science and	
10728, 10748, 10772, 11112,		technology-----	11228
11203, 14507, 14605, 16112,		awards, science and engineering--	
16236, 16291, 16340, 16545,		nominations, 1964, science and	
18218, 18329, 18410, 18552,		engineering-----	2743
18578, 19903, 20287,		linguistic and industrial instruc-	
power machinery-----	1085.	tions in Soviet Union-----	10906
2583, 5089, 7091, 18555, 21437,		literature, arts, human rights (law	
precision equipment-----	2503.	and religion), and younger gener-	
2694, 2740, 5164, 5183, 6962,		ation, recent trends, hear-	
7077, 10726, 18350, 18491,		ings-----	8381
		literature, criticism of Communist	
		China's attitude toward-----	6907

# JANUARY-DECEMBER

Entry	Entry	Entry
Union of Soviet Socialist Republics—	Union of Soviet Socialist Republics—	Union of Soviet Socialist Republics—
Continued	Continued	Continued
livestock pest control urged.....	7141	party-state control assistance
living conditions and health of		groups, control agencies, etc.,
population.....	7166	and their activities.....
machine building economics, organi-		patents for electronic equipment.....
zation and planning of enter-		periodicals in Western languages.....
prises, translation.....	18580	petroleum—
machine building industry, bonus		and gas bearing areas, schematic
system.....	6940	map for prediction.....
medical activities, developments.....	4910	industry, deficiencies, USSR
medical and biochemical investiga-		study.....
tions.....	12795	pharmaceutical preparations, physi-
medical care—		ological effects.....
and facilities.....	19964	pharmacology studies.....
specialized.....	9188	photogrammetry, development.....
medical education.....	18154	physico-technical studies.....
medical follow-up on athletes in		physics, progress, April 1964.....
training.....	7340	physiological research.....
medical industry—		physiology and neurology studies.....
progress, translations.....	20109	physiology and therapy studies.....
prospects, tasks and cooperation.....	14511	planning of retail commodity turn-
medical institutes, work being done.....	6994	over.....
medical instrument manufacturing		political agreements and results—
industry, prospects for devel-		treaty listing, etc.....
opment.....	7001	words of American statesmen
medical radiology studies.....	11072	who negotiated with Soviet
medical scientific meetings.....	19952	representatives.....
medicine—		political subjects, talks on.....
Cuban-Soviet interrelations,		postal communications, main line.....
USSR study.....	1270	problems in early diagnosis of acute
progress.....	20051	radiation sickness.....
recent advances, translations.....	20113	problems of cell chemistry.....
translations.....	14567	problems of space biology.....
Melekes, city for peaceful uses of		production costs.....
atomic energy.....	7221	reducing.....
mercury deposits, studies.....	9205	production goals under Seven-Year
metallurgy, studies.....	14630	plan, role of CPSU (address).....
meteorological and hydrological		programed instruction and pros-
organizations, plans and meet-		pects for its introduction.....
ings.....	2746	programed teaching developments.....
meteorology and hydrology, stud-		protection against chemicals and
ies.....	7022	radiation, individual means,
meteorology, research and develop-		civil defense instructions, etc.....
ment.....	7011	psychoneurological services.....
microbiological research.....	12697	public health.....
Mikhail Lomonosov, research ves-		and expanding chemical indus-
sel, 14th voyage in Atlantic		try.....
Ocean.....	16514	in national economic plan, 1964—
military doctrine.....	932	65.....
list of references.....	9780	organizations and conferences,
military translations.....	1158,	news.....
2529, 7219, 7298, 9069,	9251,	problems.....
9345, 9371, 10944, 10996,	11011,	projected measures for improve-
11199, 12585, 12624, 14478,	14486, 16519, 18245, 18267,	ment.....
18295, 18392, 18505, 18523,	20009, 20027, 20188, 20250,	service in diverse regions.....
21517, 21579, 21598, 21601		studies..... 2550, 18286,
mission to, report of President's		radiation effects, research.....
Panel on Mental Retardation.....	9703	radiobiology research.....
morphogenesis studies.....	16488	radiology research.....
morphology and biochemistry re-		railroads—
search.....	1071	and motor-vehicle transportation
natural sciences, study.....	2708	developments.....
neurosurgery—		automation.....
in USSR.....	16266	building projects price lists.....
literature survey.....	7209	religion—
North Pacific fur seals, protocol		illegal religious sect, break-up by
amending interim convention		authorities.....
of Feb. 9, 1957.....	13469	religious survival, causes and
northern, sailing directions,		means for elimination.....
change..... 1520, 5071,	16776	renewed struggle against.....
Norway boundary, study.....	7762	report on Chilean elections.....
nutrition, rational popularization.....	18515	research studies—
oceanography, physical, scientific		completed, list.....
works, 1960-62.....	5339	in progress, list.....
outer space—		rheumatism research.....
explorations.....	2507	rifle marksmanship and skin div-
flight training, aspects.....	1083	ing.....
research, 5 years.....	16383	rivers, geographical and climatic
papers on variation problems and		factors affecting regimes.....
fluctuation escape.....	16430	roentgenology and radiology stud-
		ies.....
		rural telephone networks planning.....

# INDEX 1964

Entry	Entry
United Arab Republic (Egypt)—Con. Continued	Union of Soviet Socialist Republics— Continued
Russo-Chinese treaties and agree- ments relating to Sinkiang, 1851-1949-----	Soviets criticize British policy, Lan- caster House is arena of hypoc- risy-----
12863	16504
satellites and rockets, nuclear com- ponent of cosmic rays investi- gations-----	sovnarkhoz carries out preventive inspection-----
12986	10747
science—	specialists at Khmero-Soviet Hos- pital at Phom-Penh-----
administration, articles-----	2602
in Soviet Union-----	stock breeding-----
21504	12753
new achievements, conversation between Tass correspondent and member of Committee on Lenin Prizes in Science and Technology-----	surgery—
16203	methods-----
organization and administra- tion-----	research-----
2756, 21614	16264
public councils (soviets)-----	scientific research in next few years-----
16088	9082
science and education-----	surgical and diagnostic practices-----
5176	9211
science and technology, advanced methods, proposals for use in national economy and agricul- ture-----	teaching machines, design and use-----
12979	11130
trends and achievements-----	technology—
16492	planning development of new technology-----
trends and developments-----	901
970	pneumatic automation-----
scientific abstracts-----	telecommunications, new books-----
1006, 1016, 1197, 2657, 2697, 2732-33, 5042, 5107, 5169-70, 5283, 6972, 7162, 8973, 8996, 9035-36, 9372, 10940, 11240, 12580, 12690, 13015, 14424, 14577, 16092, 16198, 16245, 16391, 18193-194, 18376, 18498, 19900, 20056, 20092, 20115, 20166, 20353, 20365, 20384, 20405, 21388-389, 21394, 21430, 21490, 21498, 21619, 21642, 21646-----	territorial-administrative changes-----
19831	5383, 12614, 18310
publication notice-----	transportation—
scientific cooperation with Algeria, Czechoslovakia, Indonesia, Po- land and Brazil-----	translations-----
6987	1051
scientific council planned, new organ-----	1314, 2844, 4886, 5367, 8888, 8978, 9022, 9201, 9272, 10891, 12685, 14460, 14503, 14534, 16234, 16299, 16463, 19905, 20043, 20149, 20173, 20227, 21578-----
12720	unified deep water system-----
9002	16189
scientific meetings, reports-----	Turkey boundary, study-----
20244	7767
scientific organizations, cooperation between Soviet and Polish-----	two major Communist offensives (address)-----
2707	7761
scientific organizations, personal- ities, and conference reports-----	Ufa Order of Lenin Oil Refinery, 25th anniversary-----
2707	8905
scientific research—	veterinary medicine organization-----
deficiencies in planning work, translation-----	16505
11117	Volga region, poorly planned sci- entific institutes-----
institutes criticized in Soviet press-----	16201
16431	water bodies, acclimatization of fish and invertebrates, results and prospects-----
11182	1003
organization-----	weather modification techniques re- view-----
20332	4923
scientists—	weather prediction, numerical, for 1962, review of publications-----
biographies-----	11691
1191, 2862-63, 7159, 8909, 9163, 12625, 12637, 12678, 14418, 16380, 19909, 20317, 20333, 21539-----	western relationship of ice phase dates on some lakes and rivers-----
18181	16553
Sino-Soviet dispute—	window glass, determination of no injury to U.S. industry-----
class struggle on world scale-----	20851
2731	workers, material incentives and de- velopment of production-----
Pelpling's provocative polemic against Moscow-----	10725
9113	world of the ocean, plan of investi- gation-----
Pelpling's version-----	21486
1332	world's first atomic electric power station, 10 year results-----
social sciences—	20337
methodology-----	zinc, copper, cobalt and molybde- num in some soils in European part of USSR-----
9254	18343
research studies in progress, list, textbook for Soviet secondary schools-----	Union Pacific R.R., accidents-----
20812	8843, 10717
12945	Union Town, N.Y., population, special census-----
Soviet East, plant physiology and pathology, and agronomical problems, USSR-----	13765
20221	Union wages, see Wages.
Soviet technical press, current re- view (periodical)-----	Unions, see Labor unions—also names of unions.
3395	United heaters: current industrial reports-----
	3391
	summary, 1963-----
	8116
	Unit safety management-----
	20999
	United Air Lines, Inc., emergency board report-----
	4653
	United Aircraft Corporation, repair kits procurement, unnecessary costs incurred in packaging, Air Force Dept., GAO report-----
	12499
	United Arab Republic (Egypt): agricultural commodities, agree- ments-----
	1611, 15115, 18980, 20836
	economic assistance under Public law 480 and other programs-----
	12316
	foreign trade regulations-----
	4854
	market factors in U.A.R.-----
	21091

# JANUARY-DECEMBER

Entry	Entry
	United Arab Republic (Egypt)—Con.
	ocean transportation, claims for recovery of excessive costs financed by Commodity Credit Corporation, Agriculture Dept., GAO report..... 8733
16564	sailing directions..... 7632
10747	selling in UAR..... 6852
2602	socialism under Nasser, contrasted with Algerian..... 2729
12753	summit meeting in Alexandria, Soviet report..... 20410
5393	trade in cotton textiles, agreement war plants' production, translation..... 7787
16264	United Brotherhood of Carpenters and Joiners of America, local union 746, qualify as trust for tax exemption purposes..... 2526
9082	United Daughters of the Confederacy: design patent, extend..... 2004
9211	law..... 1942
11130	report..... 2140
901	United Federation of Postal Clerks, AFL-CIO, agreement with Post Office Department..... 15026
9310	United Kingdom of Great Britain and Northern Ireland, see Great Britain.
21573	United Nations:
1009,	action agency for peace and progress..... 20822
4, 18310	charter, enforcement of art. 19 as to payment by members of assessments in arrears, expressing sense of Congress, reports..... 17799, 17800
1051,	conference on law of the sea, convention on Continental Shelf..... 15114
8888,	Economic and Social Council, role in international development (statement)..... 20821
10891,	fact-finding mission to South Vietnam, report..... 6519
14534,	financial management..... 11618
19905,	1st 25 years, from San Francisco to 1970's (address)..... 7772, 9998
20227,	Food and Agriculture Organization, United States report to FAO on progress made toward purpose of organization..... 14293
16189	General Assembly, 18th session, report..... 6271
7767	international conference on peaceful uses of atomic energy—summary (address)..... 19267
7761	U.S. participation (statement)..... 19265
8905	member nations, political rights of women..... 5766
16505	new materials useful in teaching, bibliography..... 6564
16201	teaching about in U.S., 1960-63..... 14199
1003	United Nations in crisis, report..... 6271
4923	United States participation—amend act, report..... 2183
11691	departmental edition..... 1600, 18959
16553	document edition..... 279, 17446
20851	United Nations Educational, Scientific and Cultural Organization, newsletter..... 4104
10725	United Nations International Children's Emergency Fund, MIT-UNICEF studies on production of fish protein concentrate..... 8601
21486	United Spanish War Veterans: convention, 1963, proceedings..... 12025
20337	memorial in D.C., authorize law..... 19420
18343	reports..... 17552, 19577
43, 10717	United States:
13765	NOTE:—For all subjects pertaining to the United States, except its government, general history, and description, see such subjects.

Entry	Entry
	United States—Continued
	America illustrated (periodical)—Polish language..... 3251
	Russian language..... 3252
	becoming a citizen series—our American way of life..... 12535
	our Government..... 18157
	our United States..... 14360
	teacher's guide..... 12536
	Constitution and Government, Federal textbook on citizenship..... 18158, 19810
	designate 1964 and 1965 as period to See the United States—law..... 17275
	report..... 2053, 14084
	facts, from recent Census Bureau surveys..... 11908
	geographic names, decision lists..... 796, 8749-50
	on eve of Civil War as described in 1860 census..... 10114
	our country, troop trophies..... 15269
	See America Year, 1964, designate, report..... 2053
	state of the Union address by President Johnson..... 1996
	statistical abstract, 1964—departmental edition..... 17113
	document edition..... 17445
	urban, consumer expenditures and income..... 11268, 18623
	United States Arms Control and Disarmament Agency, biographic register..... 1595
	United States-Canadian Joint Committee, on Trade and Economic Affairs, agreement..... 1619
	United States coast pilots, see Coast pilots.
	United States code, see Codes of law.
	United States commissioners health and life insurance benefits, extend to—
	hearing..... 10338
	law..... 17390
	reports..... 12080, 17795
	United States Courts, see Courts of United States.
	United States Customs Year: designate 1964—
	law..... 1982
	report..... 2054
	United States Educational and Cultural Foundation in Liberia, agreement..... 15122
	United States Educational Foundation in Ceylon, agreement..... 20840
	United States Educational Foundation in Greece, financing of exchange programs, agreement..... 7779
	United States Educational Foundation in Iceland, agreement..... 11631
	United States Educational Foundation in Norway, agreement..... 11634
	United States Educational Foundation in Republic of China, agreement..... 13478
	United States Government organization manual..... 14256
	United States Information Agency: appropriations, 1964—
	hearings..... 515
	reports..... 511, 2082
	appropriations, 1965—
	hearings..... 10288, 15791
	law..... 17386
	reports..... 10245, 21193, 21233
	biographic register..... 1595
	career reserve officer examination, sample questions..... 7748
	facts about USIA..... 5736, 20866
	field staff, Foreign Service list..... 3524
	Foreign Service, career opportunities for young people..... 3179

Do not order from index; see indicated entry

Page 649



# INDEX 1964

Entry	Entry
United States Information Agency— Continued	Unlading and lading : ammunition loading terminals..... 14206 C-130 aircraft ramp unloading kit..... 5883 fresh fruit and vegetables, unloads— 41 cities, 1963..... 7877 midwestern cities..... 5791 southern cities..... 5792 western cities..... 5790
legislative authority, provide, re- port..... 2184	hard winter wheat area, loading boxcars at country elevators..... 19088
magazine reprint MR series..... 3700	loading insert containers and cargo transporters..... 13681
press releases..... 3928	loading out produce in warehouses, 3 methods..... 11773
report, semiannual..... 15141	Untermyer, Louis, Robert Frost, a backward look..... 9485
television operations and mainte- nance technicians, examination announcement..... 17147	Uota, M.: improved sulfur dioxide fumigation of grapes loaded in railway refrigerator cars..... 4211
winning cold war, U.S. ideological offensive, hearings..... 8382	quality and respiration rates in stock flowers treated with ben- zylaminopurine..... 13560
United States Mission to United Na- tions, biographic register..... 1595	Up and around, booklet to aid stroke patient in activities of daily living..... 13422
United States Olympic Association : change name— law..... 17266 reports..... 2051, 15673	Upland cotton, see Cotton. Upper air, see Atmosphere. Upper atmosphere, see Atmosphere. Upper Cretaceous period, see Cretace- ous period.
United States Olympic Committee : naming— law..... 17266 reports..... 2051, 15673	Upper Klamath National Wildlife Re- fuge : administration— law..... 17425 report..... 2093, 17595
United States Park Police, see Police.	Upper Mississippi River Wildlife and Fish Refuge, general informa- tion..... 10568
United States-Puerto Rico Commis- sion on Status of Puerto Rico : establish— hearing..... 6513 law..... 6182 report..... 504	Upper Volta, foreign trade regula- tions..... 14383
United States reports, see Supreme Court.	Upson, Joseph E., bedrock valleys of New England coast as related to fluctuations of sea level..... 19787
United States Study Commission on Savannah, Altamaha, St. Marys, Apalachicola-Chatta- hoochee, and Perdido-Escambia River Basins, and intervening areas, see United States Study Commission, Southeast River Basins.	Upton quadrangle, Wyo., geology..... 19776
United States Study Commission, Southeast River Basins, re- port..... 6375	Uran, Josephine M.: legal status of women in U.S., re- port for— Michigan..... 5763 Texas..... 13540 Washington..... 9891 Wisconsin..... 11721
United States Travel Service : illegal contract payment provisions and other deficient contracting practices employed, GAO re- port..... 10599 press releases..... 3929 report, Apr.-Sept. 1963..... 3180 visit USA program (remarks)..... 5740	Uranium : alloyed steels, their fabrication and mechanical properties..... 9520 alloys, structure and properties..... 10967 area, Bokon Mountain, southeastern Alaska..... 6798 catalyst, for removal of hydrocar- bons and carbon monoxide from automotive exhaust..... 1441 chemistry of, and transuranium ele- ments..... 19229 contributions to geology of uranium (series) --- 2413, 10629, 14337, 15941
United Supreme Council, 33d Degree, Ancient and Accepted Scottish Rite of Freemasonry, Southern Jurisdiction exempt from D.C. tax..... 15450, 15671, 17209	deposits— Crooks Gap, Fremont County, Wyo..... 14337 Front Range, Colo., geology..... 806, 18106
Universal instruments, calibration of universal ratio sets, modifica- tions in methods..... 18808	Powder River basin, southern part..... 10629 Pumpkin Buttes area of Powder River basin, Wyo..... 15941
Universal joints, see Joints (Univer- sal).	effect on isothermal transformation and hardenability of low-alloy steel..... 18697
Universal military training and serv- ice act, see Military service.	geology and uranium deposits of southern Black Hills (series)..... 2411- 12, 21348
Universal ratio sets, see Universal instruments.	geology of uranium-bearing veins in conterminous United States..... 4797 in Peru..... 21014 in Perus area, Sao Paulo, Brazil, reconnaissance..... 17058
Universe, problems of cosmogony, USSR articles..... 10880, 10978, 11055, 12691-692, 12808, 16037	
Universities, see Colleges and uni- versities.	
University of Colorado, microcalorim- etry, duty-free entry..... 14089, 17230, 17580	
University of Nebraska, stone for con- struction of Sheldon Memorial Art Gallery, duty-free entry..... 14089, 17230, 17580	
University of Tennessee : Agricultural Research Laboratory, research progress report..... 8067 rheogoniometer, duty-free entry..... 14089, 17230, 17580	
University of Zagreb, Yugoslavia, or- ganization of instruction and research..... 20213	

# JANUARY-DECEMBER

Entry	Entry
14206	Uranium—Continued
5883	metal, electrolysis of uranium dioxide in fluoride melts.....
7877	11340
5791	Mi Vida mine, Big Indian district, San Juan County, Utah, statistical interpretation of sample assay data.....
5792	21717
5790	18712
19088	minerals yearbook chapter.....
13681	miners and millers, cancer mortality patterns, 1950-62.....
11773	15044
9485	molten-salt electrorefining.....
4211	18690
13560	Morro do Vento, Serra de Jacobina, Brazil.....
13422	18113
	natural, amount of U-235 isotope in official USAEC values.....
	13716
	New Hampshire Paleozoic plutonic series, 3 early groups, distribution.....
	21350
	ore, subgrade calcareous, alkaline leach processing.....
	9525
	outlook for mining industry (remarks).....
	19262
	6807
	Panhandle gas field, Texas.....
	selected measurement methods in nuclear fuel cycle.....
	4303
	19249
	thorium systems, alloys structure.....
	5953
	underground mining, hygienic aspects, USSR study.....
	7291
	Uranium carbide:
	conference, East Hartford, Conn., tions, summaries.....
	8079
	nuclear fuel, development.....
	21018
	Uranium dioxide:
17425	direct electrolysis to uranium metal in fluoride melts.....
17595	11340
	fabrication cost estimate.....
	8053
10568	oxygen to metal ratio in solid solutions of uranium and plutonium dioxides, measurement.....
14383	8054
19787	UO <sub>2</sub> fuel systems for water reactor applications, development and testing.....
19776	5956
	Uranium isotopes:
	U-233, systems containing, critical dimensions.....
	17062
	U-235—
5763	amount in natural uranium, official USAEC values.....
13540	13716
9891	fission, neutron induced, symmetry at individual resonances.....
11721	5980
	retained in absolute air filters, non-destructive measurement, systems containing, critical dimensions.....
	13704
	17062
	Uranium tetrafluoride, molten systems, with alkali fluorides, electric conductivity and density.....
	18684
	Urban areas, see Cities and towns.
	Urban Life, Space and Science Conference, see Space, Science and Urban Life Conference.
	Urban planners, see City planners.
	Urban planning, see Redevelopment (city planning, etc.).
	Urban renewal, see Redevelopment (city planning, etc.).
	Urban Renewal Administration:
	bulletin.....
	16903
	community renewal program (CRP), policy.....
	3182
	excessive allocation of costs of streets and facilities to Northside urban renewal project, Kansas City, Mo., GAO report.....
	19754
	news releases.....
	3930
	Urban renewal manual.....
	4126
	Urea:
	chemical composition of urea-extractable components of plague virus EV, USSR study.....
	20387
	fertilizer of winter wheat, USSR study.....
	16366

Entry	Entry
Urea—Continued	
hypertonic, intravenous, in cerebral edema.....	15237
use for treatment of impairment of excretory function of kidneys in burns, USSR study.....	18231
Urine:	
ascorbic acid levels as related to oral health status.....	1746
catecholamines in motion sickness and turbulent flight.....	1742
evacuating system for use in full-pressure suits.....	8006
excretion of 17-hydroxycorticosteroids and 5-hydroxyindoleacetic acid in pilots, USSR study.....	8881
gross chemical changes of human waste undergoing thermal decomposition.....	7986
human waste, combustion and product recovery.....	7987
maple syrup disease, general information.....	19310
Uruguay:	
economy, basic data.....	4859
foreign trade regulations.....	4853
Peace Corps, agreement.....	1614
plant quarantine import requirements.....	19060
USAARU, see Army Aeromedical Research Unit.	
USAEC, see Atomic Energy Commission.	
USAFI, see Armed Forces Institute.	
USAPRO, see Army Personnel Research Office.	
USDA, see Agriculture Department.	
Use tax:	
District of Columbia, exempt House of Representatives majority and minority rooms, report.....	17618
Federal, on trucks, truck tractors, and buses.....	19820
USIA, see United States Information Agency.	
Using records to prevent accident, conference workshop (remarks).....	13085, 14679
Uspekhi sovremennoy biologii (periodical):	
translations.....	16331
USSR, see Union of Soviet Socialist Republics.	
Utah:	
annual survey of manufactures, 1962, standard metropolitan statistical areas and large industrial counties.....	6032
area measurement report.....	17076
beryllium-bearing tuft, Honeycomb Hills, Juab County.....	9524
central and southern, marine Jurassic pelecypods.....	18137
climatological data.....	3329
electric rate book.....	19700
Green River oil shale, yields, 1952-62.....	11326
labor organizations, reporting, register.....	16574
mineral and water resources.....	8451
mineral industry, minerals yearbook chapter.....	1425
municipal waste facilities, 1962 inventory.....	3108
municipal water facilities.....	18913
national forests, recreation.....	12439
precipitation data, hourly.....	3578
refractory clay deposits.....	13106
tellurium resources.....	5493
water supply outlook and snow surveys.....	4143
women—	
labor laws, summary.....	13547
legal status.....	16924
workers, 1960.....	1668

# INDEX 1964

	Entry		Entry
Utah County, Utah:		Vacuum—Continued	
geology of—		friction, wear, and decomposition	
Eureka quadrangle.....	8755	mechanisms for polymer com-	
Tintic Junction quadrangle.....	8797	positions.....	3027
Uterus, cancer, USSR study.....	18249	fused fluoride coatings as solid lubri-	
Utilities:		cants.....	16686
naval shore activities, conservation		high speed performance of minia-	
program survey manual.....	5778	ture ball bearings lubricated	
water, service-pipe requirements,		with combinations of barium,	
1950-80.....	19280	gold and silver films.....	13232
Utility companies, <i>see</i> Electric utili-		hot rolling molybdenum conditions,	
ties—Public utilities.....		USSR study.....	1011
Utility, induced utilities, and small		measurement, bibliography and in-	
worlds.....	63	dex, errata.....	13273
Utility man, 1 & C, Navy training		spraying, thickness monitor for thin	
course.....	20699	films obtained.....	5917
Utility trucks, <i>see</i> Motortrucks.		treatment of metals, USSR study.....	10790
Utilization research report.....	7954	Vacuum furnaces:	
Utricle, receptor cells, histochemical		high temperature, used in labora-	
and ultrastructural changes,		tories, USSR study.....	2810
altered gravitational field,		radiant heater offers high structural	
USSR study.....	9111	rigidity, etc.....	13178
Utter, Fred M., use of plant extracts		Vacuum gages:	
in serological studies of fish.....	10574	precision gage measures ultrahigh	
Uvalde County, Tex., geology and		vacuum levels.....	13200
ground-water resources.....	10652	Redhead and Bayard-Alpert, re-	
Uzbek Soviet Socialist Republic:		sponse aboard Explorer XVII.	7533
chemical industry, main trend of		thermal conductivity, calibration	
development.....	21462	in range of 10 <sup>-4</sup> to 1 Torr lower	
Institute of Geology and Geophys-		limit, errata.....	3006
ics imeni Kh. M. Abdullayev		<i>see also</i> Ionization gages.	
of Academy of Sciences.....	18483	Vacuum systems, equipment for pro-	
mountain slide and rescue opera-		cessing refractory metals in electro-	
tions in Uzbekistan.....	12864	vacuum industry, USSR	
Uzbekistan, <i>see</i> Uzbek Soviet Socialist		study.....	5208
Republic.		Vacuum tubes:	
		de voltmeter, Hewlett Packard	
		412A, instrument calibration	
		procedure, technical manual.....	13360
		high-power, emission tester.....	20559
		<i>see also</i> Diodes.	
		Valachi, Joseph:	
		testimony, hearings.....	533
		print additional copies, reports.....	325,
			455
		VALB, <i>see</i> Veterans of Abraham Lin-	
		coln Brigade.	
		Vale, Lester B., height gage.....	5503
		Valence, estimation of chemical bond	
		from superfine structure of electro-	
		nic paramagnetic resonance	
		spectra of manganese.....	14456
		Valentine, Ruth E.:	
		photographic dealers and studios,	
		bibliography.....	20787
		store arrangement and display.....	15079
		Valentine National Wildlife Refuge,	
		birds, list.....	19732
		Valeo, Frank, testimony, hearings.....	8456
		Vallée Grande-Bandelier National	
		Park, establish, hearing.....	17880
		Valley, James L., mineral industry of	
		Georgia.....	21697
		Valley County, Idaho, reconnaissance	
		petrographic cross-section of	
		Idaho batholith.....	8760
		Valley County, Mont., geology of Fort	
		Peck area.....	8767
		Valleys, general theory of meander-	
		ing valleys (series).....	18130-131
		Valuation:	
		spot cotton quotations, relation to	
		spot values and average differ-	
		entials.....	19089
		timber appraisal, Forest Service	
		policies and procedures, general	
		review.....	2351
		Valves:	
		Federal item identification guides	
		for supply cataloging.....	12292
		supplements.....	3473
		gate, with ceramic-coated base op-	
		erates at high temperatures....	16670

Entry	Entry	Entry
	Valves—Continued	Van Duzen, Jean L., medical practice on Navaho Reservation-----
	high-temperature, high-pressure spherical segment valve provides quick opening-----	20763
3027	multiple port pressure scanner valve-----	Vanguard, see Satellites.
16686	packless valve with all-metal seal handles wide temperature, pressure range-----	Van Lieu, J. A., coal resources of Lawrence County, Pa.-----
	tricuspid, artificial, replacing mitral valve of heart, USSR study-----	19771
13232	Vanadium:	6238,
1011	and alloys, production from ores of Kazakhstan, prospects, USSR study-----	17174
13273	electrorefined, effects of yttrium and rare-earth-metal additions-----	Van Olphen, Barbara R., relief-----
5917	mineral industry survey, monthly-----	237
10790	minerals yearbook chapter-----	Van Sant, Joel N., refractory-clay deposits of Utah-----
	phase transformations in iron-vanadium system, USSR study-----	13106
2810	recrystallization-----	Vapor pressure:
13178	reducing compounds in bomb reactors-----	and vapor fractionation of tektite melts-----
13200	Vanadium oxides:	20570
7533	phase diagram for system magnesium oxide-vanadium-----	metal halides, servomechanical system for measuring-----
	phase diagram for system vanadium pentoxide-zinc oxide-----	11327
3006	Van Albert, Charles E., training analysis procedure-----	sodium vapor expansion characteristics determination with inert-gas-injection measuring technique-----
	Van Allen, J. A., edge of polar plateau for galactic cosmic rays and their charged albedo-----	11405
5208	Van Allen radiation belts:	tungsten (VI) chloride and hafnium (IV) iodide, by metal diaphragm technique-----
	artificial, synchrotron radiation calculations-----	9500
13360	dose rate of penetrating electrons of outer belt, USSR study-----	Vapors:
20559	Elektron studies earth's radiation belt, USSR-----	cesium, pyrometer correction due to dimer absorption-----
533	shock wave in front of earth, effect, USSR study-----	condensing at high velocities in small straight tubes, heat transfer studies-----
325,	Van Arsdell, E. P., growing white pines to avoid blister rust-----	21736
455	Van Bavel, C. H. M., surface energy balance in arid lands agriculture 1960-61-----	detectors, East German translation-----
5503	Van Buren, James K., inservice training in stroke rehabilitation for care facility personnel in Oregon-----	1025
14456	Vance, A. M., lawn insect control-----	see also Water vapor.
20787	Vanco, Michael R., radiator area characteristics of out-of-pile thermionic gas cycle space power systems-----	Vargo, Donald J., electromagnetic acceleration of variable-mass plasma-----
15079	Vancouver, Wash., port-----	21762
19732	Vancouver Island, B. C., shrimp explorations, Oct.-Nov. 1962-----	Variable light source with million-to-one intensity ratio-----
8456	Van de Graaff generator, Split, Yugoslavia, 600-kilovolt electrostatic accelerator at School of Engineering-----	13186
17880	Vandenburg Air Force Base, Calif., Dry Gulch diffusion program, wind data, etc-----	Variable-transparency wall regulates temperatures of structures-----
21697	Van Dolah, Robert W.: abatement of noise from explosives testing-----	14811
	natural gas concentration effect on ignitibility of gallery atmospheres-----	Variables (mathematics):
8760	Van Dress, Michael G.: estimated number of days' supply of food and beverages in warehouses, 1963-----	analog, coding for constant percentage error-----
8767	inventory of food products and beverages in warehouses at wholesale, 1962-----	sampled binomially distributed, moments-----
130-131		13332
19089		Variation (biology):
2351		mutagenic and antimutagenic action of sodium gallate, USSR study-----
12292		9061
3473		plant populations, phenogenetic analysis, USSR study-----
16670		5032
		whitefish multiplicity and feeding habits in Arctic bodies of water-----
		5006
		Varicose veins:
		cause, treatment, etc-----
		20751
		dilated, use of sergolin in treatment, USSR study-----
		1282
		Varnish and varnishing, current industrial reports-----
		3390, 11899
		Vary, A., thermal and thermionic characteristics of large-scale experimental thermionic converter-----
		9619
		Vasconi, Eleonora, relief-----
		6267, 11997
		Vascular grafts, see Grafting (physiology).
		Vascular surgery, see Surgery.
		Vascular system, see Blood vessels.
		Vasilevsky, Alexander M., ownership of commercial forest land in Minnesota, 1962-----
		12462
		Vasodilators, effects on physical work capacity and orthostatic tolerance-----
		13736
		Vatican:
		blamed for condoning fascism, USSR views-----
		11038
		under new Pope, USSR study-----
		11019
		VBWR, see Reactors (atomic).



# INDEX 1964

	Entry		Entry
Veal:		Vegetables—Continued	
imports, restrict—		spring, acreage marketing guide.....	3
hearings .....	10418, 14135	storing on pallets in wholesale	
reports .....	14098, 15544, 21194	warehouses .....	4209
trade agreement with—		summer and fall, acreage market-	
Australia .....	9829	ing guides .....	5784
Ireland .....	9830	vegetable situation .....	4130
Mexico .....	15120	winter, acreage marketing guides.....	15181
New Zealand .....	9831	wholesale market, organization,	
Vectorcardiograms, normal spatial, in		Minneapolis-St. Paul and Du-	
laboratory animals and meth-		luth-Superior .....	5838
ods for its recording, USSR			
study .....	16277	Vegetation:	
Vectorcardiography, principles, USSR		California, annual-type range,	
study .....	12687	changes in, then and now.....	8663
Vectorial reflectance of Explorer IX		changes following Mingus Moun-	
satellite material .....	16701	tain burn .....	12471
Vectors (biological):		determination of cerium-144.....	13696
control, manual of naval preventive		establishing on exposed subsoil in	
medicine .....	11310	southern Iowa and northern	
Vega Dam and Reservoir, lands ac-		Missouri .....	4197
quired, reconvey mineral interest-		geochemistry, Yellow Cat area,	
s to former owners, report.....	15559	Utah .....	21351
Vegetable gardens, see Gardens.		phyreatophyte, guide for survey-	
Vegetables:		ing .....	9933
canning industry, review of 1963,		Vehicles:	
outlook for 1964 .....	15299	commercial-type, mobilization re-	
commercial processing, acreage		serve stocks, uneconomical	
marketing guides .....	5785	management by Navy Dept.,	
containers, additional standard		GAO report .....	8734
sizes, amend act—		equipment components, Federal	
hearings .....	2124	item identification guides for	
law .....	17375	supply cataloging .....	12289
reports .....	2037, 17749	supplements .....	3470
culture, etc., publications, price		maintenance at non-personnel of-	
list .....	16825	fices, facilities handbook .....	20729
foreign trade prospects .....	15934	maintenance facility, Post Office	
fresh—		Department handbook. 20728,	21834
acreage, production, etc.—		mobility research—	
annual summary .....	3166	measuring soil properties.....	19664
monthly report .....	4131	strength-moisture-density rela-	
California-Arizona, interstate		tions of fine-grained soils .....	6599
hauling by rail and truck .....	16959	moon, radiation shields for thermal	
foreign agriculture circulars.....	3520	control .....	9573
market news, weekly summary.....	3539	moving, stresses under .....	15878
prices .....	13599	see also Aircraft—Motor vehicles—	
shipments, by States, commodi-		Spacecraft .....	
ties .....		Veins, see Varicose veins.	
calendar year 1963 .....	9907	Veitch diagram plotter simplifies	
months, 1963 .....	11734	boolean functions .....	11371
sold in selected markets, 1956-62,		Velocity:	
prices and spreads .....	7947	and boundary layer on bodies of	
unloads—		revolution, methods for com-	
eastern cities, by commodities,		puting flow distribution .....	7815
States, etc. ....	5780, 7879	corpuscular streams in solar corona	
41 cities, 1963 .....	7877	based on observations of solar	
midwestern cities, by commodi-		radio emission .....	20624
ties, States, etc. ....	5791, 7881	faint meteors .....	18945
southern cities, by commodi-		free stream, heat transfer measure-	
ties, States etc. ....	5792, 7882	ments at Mach number of 8	
western cities, by commodi-		in vicinity of 90° interior	
ties, States, etc. ....	5790, 7880	corner .....	18750
wholesale market facilities, Mil-		low-cost tape system measures.....	14808
waukee, Wis. ....	15214	mass, measure with use of single	
green, for good eating, recipes.....	11759	total- and static-pressure	
harvesting and handling, use of		probes .....	21769
cushioning materials .....	13567	mean, relationships in sand-bed	
hydrocooling, guide .....	1708	streams with discharge of	
Jackson County, Fla., processing		sands .....	18136
plant, feasibility .....	5924	midcourse corrections for lunar	
labor used to produce, estimates by		mission, Monte Carlo computa-	
States, 1959 .....	9963	tion of statistics .....	11416
Mexican winter production, survey ..	14288	orbital element control with poten-	
official grade standards and inspec-		tial applications to manned	
tion .....	4182	space missions .....	11391
processed—		wall pressure fluctuations and pres-	
plants under USDA continuous		sure-velocity correlations in	
inspection, list .....	13558	turbulent boundary layer .....	9614
standards for grades .....	19044	Velveteen, Italian exports of cotton	
processing, statistical report .....	4132	fabrics, trade agreement .....	20827
annual summary, 1963 .....	3167	Vending machines:	
seeds, foreign agriculture circulars ..	3520	automatic, U.S. export market in	
shelf life, extending by radiation		United Kingdom .....	143
technology .....	5987	current industrial reports .....	11903

# JANUARY-DECEMBER

Entry	Entry
	Veneers:
3	cottonwood, cutting and drying
4209	properties
5784	Federal item identification guides
4130	for supply cataloging
5181	supplements
	grades recommended for develop-
	ment of hardwood log grades
	hardwood, using FPL grades
	softwood, current industrial re-
5838	ports
	southern pine, experiments in
	gluing
8663	sugar maple veneer logs, grading
	for pith flecks
12471	Veneer diseases:
3696	basic statistics on problem in U.S.,
	fact sheet, 1963
4197	current literature, abstracts
	education, report
21351	Venezuela:
9933	Army area handbook
	economy, basic data
	fisheries, commercial catch, foreign
	trade, and major developments,
	1961-62
8734	foreign trade regulations
	increased trade and closer commer-
	cial ties between Venezuela and
	U.S. (address)
12289	labor organizations, directory
3470	market for U.S. products, interna-
	tional commerce, supplement
20729	sailing directions
21834	trade agreement
19664	trade mission, report of 1964
	Venom, poisonous bites, treatment
	and prevention, USSR study
6599	Ventilation:
9573	engineered performance stand-
15878	ards—
	formulas
	handbook
	mechanical design, engineering
	manual, changes
	NS Savannah filter testing
	Venturi tube, cavitation and effective
	liquid tension of nitrogen in
11371	tunnel venturi
	Venue:
	civil actions on tort claims in Dis-
7815	trict Courts, law
	Interstate Commerce Commission
	judicial reference cases, estab-
20624	lish—
18945	law
	reports
	Venus (planet):
	atmosphere—
18750	convective and radiative heating
14808	of shapes entering at suborbital
	speeds
	exploration by simple capsule
	radiative equilibrium, application
21769	of strong line absorption law
	ionosphere, theoretical study
	orbiting probes, electrically pro-
18136	pelled, constant thrust, para-
	metric study
	strength and structure
11416	Verbal abilities and arithmetic test,
	exhibit
	Verde River and Valley:
	geology and ground water
11391	summary of snow survey measure-
	ments, 1938-64
	water supply outlook and snow sur-
9614	vey
20827	Vermont:
	annual survey of manufactures,
	1962, standard metropolitan
	statistical areas, and large in-
143	dustrial counties, statistics
11903	climatic summary 1951-60, decen-
	nial census

Entry	Entry
	Vermont—Continued
	District Court, terms to be held at
	Montpelier and St. Johns-
	bury—
	law
	report
	labor organizations, reporting,
	register
	mineral industry, minerals year-
	book chapter
	municipal waste facilities, 1962 in-
	ventory
	municipal water facilities
	weather stations, decadal census
	women, legal status
	women workers, 1960
	Vermont Maple Orchards, Inc., re-
	lief
	Verrazano-Narrows Bridge, 5-cent
	commemorative postage stamp
	(poster)
	Vertebrates:
	habitat relations, Sierra Ancha
	Experimental Forest
	larger, on AEC Savannah River
	plant site, population status
	report
	leucocytes, survival in intestines
	of blood-sucking insects and
	ticks, USSR study
	parthenogenesis, USSR study
	Vertigo, infight loss of consciousness,
	case report
	Vertol, see Helicopters.
	Vervoot, Willem, free-living Cope-
	poda from Ifaluk Atoll in
	Caroline Islands
	Vessels, see Fishing vessels—Ice
	breakers—Shipbuilding—
	Ships—Warships.
	Vest, Charles E., adaptation of MoS,
	in situ process for lubricating
	spacecraft mechanical compon-
	ents
	Vestnik Akademii Meditsinskikh Nauk
	SSSR (periodical): transla-
	tions
	2509, 5025, 11018,
	14549,
	14582
	Vestnik Akademii Nauk SSSR (period-
	ical):
	translations
	4898, 20076, 20299
	Vestnik of Academy of Medical
	Sciences USSR (periodical):
	translations
	21519
	Vestnik of USSR Academy of Medical
	Sciences (periodical):
	translations
	12595, 12639, 12771
	Vestnik of USSR Academy of Sciences
	(periodical):
	translations
	16395
	Vestnik svyazi (periodical):
	translations
	1096,
	2542, 5013, 5225, 7264,
	9255,
	12622, 12717, 13016, 16233,
	21567.
	Vestnik vysshesh shkoly (periodical):
	translations
	4987
	Veterans:
	benefits—
	available for veterans and de-
	pendents, fact sheet
	brief explanation
	laws, compilation
	slide chart calculator, print addi-
	tional copies, reports
	6313, 10395
	blind, grants for specially adapted
	housing, expand—
	hearing
	law
	report
	burial allowances, amend law—
	law
	report
	census, 1960, announcement and
	order form
	15301

# INDEX 1964

	Entry
Veterans—Continued	
claims, disposition by regional offices, Oct. 1963	12158
defects in mortgaged homes, VA to aid—	
hearing	8404
report	15706
disabled—	
educational assistance to children—	
hearing	542
law	13909
report	513
employment, blueprint for action	11252
home-buying guide	7832
loans—	
direct, sale by VA at prices determined to be reasonable—	
hearings	4511
law	17261
reports	4470, 15696
guaranteed and direct, questions and answers	5745
guaranteed or insured, extend maturity—	
hearing	542
report	2205
guaranty or insurance, VA lenders handbook, change	1650
Medal of Honor recipients hospital, etc., care for nonservice-connected disabilities—	
hearing	14154
law	17340
reports	15558, 15750
medical care, intermediate and nursing home—	
hearings	12278
law	17309
report	15749
medical care legislation, hearings	12161
miscellaneous bills—	
hearing	14155
non-service connected pension benefits for all wars, hearings	14019
older American—	
outpatient dental care where discharges were corrected—	
law	17289
reports	10277, 15752
pensions, see in main alphabet Pensions.	
publications, price list	1553
reemployment rights, legal guide and case digest	15145
relief, code of Federal regulations	10533
service-disabled, life insurance, improper issuance, GAO review	21337
social and economic data for former members of Armed Forces, census of population, 1960	13774
State employment representative, assistant, examination announcement	17142
unemployment compensation, appropriations, 1964, supplemental—	
law	8234
report	8416
veterans with mental disorders resident in VA hospitals	11454, 20652
see also Life Insurance—Pensions—	
Rehabilitation of the disabled.	
Veterans Administration:	
appropriations, 1964—	
deficiency, hearings	10285
supplemental, proposal	10162
appropriations, 1965—	
hearings	10290
law	13904
reports	8288, 8420, 13951
budget, 1965, amendments	12173, 14026

	Entry
Veterans Administration—Con.	
career opportunities—	
Dietetic Service	16905
engineers and architects	20870
medical technologists and technicians	5744
practical nursing	16906
defects in mortgaged homes, extend aid—	
hearing	8404
report	15706
employment benefits for employees	21916
excessive Federal contributions to veterans life insurance trust funds, GAO report	21336
garages used by field station employees, loss of revenue resulting from inadequate rental rates, GAO report	10608
grants to blind veterans for specially adapted housing, expand—	
hearing	4573
law	17260
report	15695
handbook series	1648
housing, fix prices for resale of direct loans hearing	4573
information bulletin IB series	1649, 20869
5742-43, 9866-67,	21215
laws administered by, compilation	
librarians, examination announcement	8160
life insurance, improper issuance, GAO review	21837
loans, direct, sale at prices determined to be reasonable—	
hearings	4511
law	17261
reports	4470, 15696
manual	11674
medical illustrator and photographer, examination announcement	15360
medical program, hearings on various bills	12161
medical research and development, indemnification of research contractors—	
law	17292
report	15753
medical research report	12159
memorial certificate program, established without legal authority, GAO review	10600
mortgages, sell participations, hearing	8404
national service life insurance—	
disability coverage to age 65—	
law	13903
reports	4447, 14064
premium rates for total disability income provision, disability protection to age 65, etc.	20871
waiver of premiums upon becoming disabled prior to age 65—	
law	13912
reports	360, 14063
Nursing Service, inservice education activities, program guide	11675
personnel information bulletin	3846
personnel workers, inclusion of volunteer workers in determining allowable number to defeat intent of appropriations act limitations, GAO report	10607
psychiatry, new programs and their implications for volunteers	9868
pulmonary disease research	21915
regional office, move from Dallas to Waco, Tex., GAO report	2404
regional offices, disposition of claims, Oct. 1963	12158

# JANUARY-DECEMBER

Entry		Entry	
	Veterans Administration—Con.		Veterans hospitals—Continued
	relieve from paying interest on		patients with mental disorders
	funds transferred between re-		resident Oct. 31, 1961... 11454, 20652
	volving funds—		Sam Rayburn Memorial, designate,
	hearings ..... 542, 4511		reports ..... 10274, 15543
	law ..... 6185		VA medical research program re-
	reports ..... 2191, 4478		port ..... 12159
	report 1963—		Veterans of Abraham Lincoln Brigade,
	departmental edition ..... 5741		activities, hearing ..... 2126
	document edition ..... 4436		Veterans of Foreign Wars of United
	safety and fire protection bulle-		States:
	tin ..... 5743, 9866, 20869		convention, proceedings ..... 12024
	serving those who served, benefits		legislative objectives, 1964, hear-
	in brief, 1963 ..... 5746		ings ..... 10347
	Uniforms, furnishing in lieu of pay-		Veterans of World War I of United
	ing cash allowances to employ-		States, Inc., convention pro-
	ees, need for effective manage-		ceedings ..... 21162
	ment action to achieve substan-		Veterans organizations:
	tial savings, GAO report ..... 19759		jobs for disabled, blueprint for ac-
	VA nurse, rewarding career for you- 7831		tion ..... 11252
	VA pamphlets ..... 1650,		legislative objectives 1964, hear-
	5744-45, 7831-32, 9868, 11676,		ings ..... 10347
	13507, 15144, 16905-907, 20870-		see also names of organizations.
	871, 21916-917.		Veterans' Reemployment Rights Bu-
	waste of funds from procurement of		reau, legal guide and case
	X-ray film development equip-		digest ..... 15145
	ment, GAO report ..... 6791		Veterinarians:
	Veterans' Affairs Committee, House:		activities of Kazan' Veterinary In-
	calendar ..... 3658		stitute, USSR ..... 4943
	committee prints ..... 12158-159		and FDA, guardians of animal
	hearings ..... 4511,		health ..... 14286
	8404, 10347, 12160-161, 14019		employment outlook ..... 9399
	investigations and studies, expenses,		examination announcement, amdt. 4377
	report ..... 2084		role in national disaster ..... 18921
	reports ..... 360-361,		veterinarian trainee, examination
	363, 4470, 4477-78, 10273-279,		announcement ..... 19337
	15541-543, 15558, 21186.		Veterinary instruments and appara-
	Veterans Appeals Board:		tus:
	information bulletin ..... 5742		equipment and supplies, Federal
	rules of practice, 1964 ..... 15144		item identification guides for
	Veterans Employment Service, assist-		supply cataloging ..... 12294
	ant State veterans employment		supplements ..... 3475
	representative, examination an-		Veterinary medicine:
	ouncement ..... 17142		USSR organization ..... 16505
	Veterans home:		virology, all-Union conference,
	Medal of Honor recipients care—		USSR ..... 20047
	hearing ..... 14154		zoonoses, description and treat-
	law ..... 17340		ment, USSR study ..... 19873
	reports ..... 15558,		Veterinary services in national emer-
	milk, inadequate management ac-		gencies ..... 1696
	tion to avoid excessive costs,		Veterinary supplies, see Veterinary
	GAO report ..... 4765		instruments and apparatus.
	Veterans hospitals:		Veterinary zoology, see Zoology.
	convalescent and nursing home		Veto messages, see President of United
	care—		States.
	hearings ..... 12278		Vibration:
	law ..... 17309		acoustical influence on convective
	report ..... 15749		heat transfer to liquids ..... 8801
	dietetic internship ..... 13507		axially symmetric equations of
	Edith Nourse Rogers Memorial, des-		liquid-filled cylindrical shell ..... 14924
	ignate, reports ..... 10273, 15543		biomedical research studies, bibli-
	Hazard Park, Calif., land ex-		ography ..... 13732
	change—		blasting, instrumentation to record,
	law ..... 17293		design requirements ..... 14763
	reports ..... 361, 15751		buckled circular plates, frequencies
	interior decoration for Veterans		and modes ..... 7568
	Administration hospitals ..... 16907		cylinders, circular, partly filled with
	John Elliott Rankin Memorial, des-		liquid, NASA report ..... 7555
	ignate reports ..... 10275, 15543		development of vibratory compac-
	McKinney, Tex., sewage treatment		tion techniques for radioactive
	plant, transfer to city—		source fabrication ..... 19239
	law ..... 17299		electronic designer's shock and
	reports ..... 10279, 15755		vibration guide for airborne ap-
	Medal of Honor recipients care—		plications ..... 1750
	hearing ..... 14154		finishing of edges of punched parts,
	law ..... 17340		Communist Chinese study ..... 11088
	reports ..... 15558, 15750		flight data of Aerobee 150A sound-
	milk, inadequate management ac-		ing rocket ..... 14858
	tion to avoid excessive costs,		isolation of satellite tape recorders ..... 7492
	GAO report ..... 4765		normal mode theory, elements ..... 13330
	milk program, extend—		problems, measurement and inter-
	hearings ..... 12115		pretation of power spectra ..... 20523
	law ..... 17388		reduction on Nimbus spacecraft ..... 18751
	reports ..... 10244, 17772		requirements, civil air regulations
			amendment ..... 19667



# INDEX 1964

Entry	Entry
Vibration—Continued	Vietnam—Continued
ring-stiffened cylindrical shell structure with various support conditions, study	North—Continued
rocket vehicles, localized environments, statistical techniques for describing	labor conditions
sensitive, magnetometer	larvae of bloodsucking mosquitoes (Culicinae), study
sphere for determining dilatational constants of visco-elastic materials	National Assembly Standing Committee, report
structural, recent research	National Front for Liberation of South Vietnam, 2d Congress, military report
theory, unsolved problems, physiological effects, USSR study	political and sociological information, translations
transducers, calibration at amplitudes up to 20g	1201, 1293, 2537, 2628, 5211, 5253, 5273, 5287, 5341, 5412, 7034, 7110, 7315, 7349, 8889, 8977, 9317, 10820, 10955, 11058, 11164, 11170, 11191, 11197, 11239, 12596, 12684, 12747, 12850, 12949, 12995, 14492, 14536, 14558, 14578, 14587, 16117, 16137, 16159, 16165, 16174, 16197, 16226, 16263, 16285, 16303, 16349, 16457, 16479, 16566, 18262, 18274, 18390, 18404, 18473, 18513, 18590, 19843, 19861, 19935, 20000, 20006, 20102, 20339, 21429, 21468, 21553
transverse, of liquid-filled shells, equations	resolution regarding attacks on naval vessels in Tonkin Gulf—law
vibration analysis of AFFTC VTOL test stand	reports
Vibration indicators, helicopter, final report	socialist economy achievement
Vice President of United States: campaign, 1964, suspend equal time provisions of communications act, report	State plan 1964, report of Council of Ministers
nomination and election including manner of selecting delegates to national political conventions, laws, etc., analysis	state structure of Democratic Republic of Vietnam
presidential transition act, 1963—law	United National Front, stronger unity
reports	northwest, Puok people, materials on social and family organization
vacancies in office, filling, proposed amendments to Constitution—hearings	ophthalmology research, translations
report	prescription for peace—Republic—
Vick, Allen R.: comparisons of experimental free-jet boundaries with theoretical results	agricultural commodities, agreements
highly underexpanded free jets impinging upon parallel flat surface	bibliography
Victoria Land, Antarctica, Willett Range coal deposits	Chinese Buddhists protest persecution, translation
Videon, F. E., brittle fracture propagation studies	citizens, instruction at Military Academy, West Point, report
Vietnam:	coup in South Viet-nam
agricultural commodities, agreement	foreign trade regulations
atomic energy cooperation for civil uses, agreement	labor conditions
Democratic Republic, see below, North	mutual defense and development programs, proposed, amended request, message from the President
foreign assistance, additional amount, message from the President	newsletter
Laos boundary, study	revolt in South Vietnam will be won
North—architecture, translations	revolution, North Vietnamese comment
artillery chapter of Communist Party struggles against fraud and falsification	U.S. imperialists to be completely defeated, Communist view
bibliography	UN fact-finding mission, report
comment on revolution in South Communist morality, General's views	South, see above, Republic
economy, translations	United States policy
961, 1147, 1171, 1280, 1295, 2540, 2623, 4935, 5005, 5051, 5212, 5234, 5252, 5272, 5285, 5349, 5364, 6922, 7182, 7234, 7278, 7307, 8901, 8931, 9271, 9316, 9341, 10734, 10833, 11057, 11162, 11171, 11198, 12597, 12683, 12748, 12791, 12812, 14495, 14535, 14609, 14654, 16173, 16195, 16239, 16290, 16346, 16437, 16451, 16480, 16565, 18261, 18391, 18405, 18447, 18591, 19849, 20034, 20100, 20400, 21470	analysis of current situation
gazetteer, official standard names	Vigilance, effects of visual display, mode on 6 hours of visual monitoring
	Vigness, I., sawtooth and half-sine shock impulses from Navy shock machine
	Vigor, complete exercise plan for boys 12 to 18
	Villages, training, USSR, what they should look like
	Vil'nyus, Lithuania, Israeli tourists visit, Soviet press report

# JANUARY-DECEMBER

Entry		Entry
13083	Vim, complete exercise plan for girls 12 to 18	11540
21413	Vinca, Yugoslavia, Boris Kldric Institute, production of radioactive isotopes	7055
11077	Vines:	
	potato, Red River Valley, killing in relation to maturity	15223
9245	woody, for southern Great Plains	20913
1170,	Vinson, Carl, chairman of Armed Services Committee, ceremony in honor of, hearing	17642
5211,	Vinti, John P., satellite theory, determination of mean elements	13237
5412,	Vinyl, see Polyvinyl pyrrolidone.	
8889,	Vinyl alcohol, biologically active polyvinyl alcohol letilan fibers, USSR study	8883
10955,	Vinyl-coated glass fiber insect screening and louver cloth, recorded voluntary standard of trade	11430
11191,	Virgin Islands:	
12684,	agriculture department, directory, 1964	9906
12995,	climatological data	3329
14578,	coast pilot, supplement	6108
16159,	duty exemption, continue, report	8287
16226,	emergency feed sale, extend to—law	19308
16349,	report	15566
18262,	government—	
18473,	amend revised Organic act to authorize issuance of general obligation bonds, law	260
19861,	certain activities, 1962, GAO review	4769
20102,	Governor, report, 1963	10672
21543	housing census, 1960	1806
	labor organizations, reporting, register	16571
	leasing of naval properties, status, hearings	4588
	mineral industry, minerals year-book chapter	20491
	municipal water facilities	18908
	principal electric facilities, map	680
	public school finance program, 1962-63	4643
	storm warning facilities chart, 1964	13525
	submerged lands, place jurisdiction within, law	263
	trees, common species	16945
	see also British Virgin Islands.	
	Virgin Islands Corporation:	
	audit by GAO	10594
	audit report, 1963	10157
	Virginia:	
	aerial radiological measuring survey ARMS, Norfolk Peninsula Area	4293
	annual survey of manufactures, 1962, statistics for States, standard metropolitan statistical areas, and large industrial counties	6029
	Breaks Interstate Park compact, amendment—law	19410
	reports	15550, 17842
	climatic summary, 1931-52	1656
	climatological data	3329
	copper deposits, geology	800
	electric rate book	15898
	firefighting agreements with D.C., amend act—law	17332
	report	15785
	fishery products, wholesale dealers, list	712, 18013
	income tax, withholding on compensation of Federal employees	3176
	labor organizations, reporting, register	16571

Entry		Entry
	Virginia—Continued	
	landings, fish and shellfish	4133, 19717
	middle and lower peninsulas, hurricane survey, engineer report—departmental edition	8517, 8259
	document edition	8259
	mineral industry, minerals year-book chapter	2990
	municipal waste facilities	3103, 18908
	precipitation data, hourly	3578
	women workers, 1960	3195
	Virginia Beach, Va., nearshore tidal and nontidal currents	12342
	Virginia City, Nev., volcanic geology, structure, and mineral deposits	19788
	Virginia Piedmont, comparison of lob-lobly, white, Virginia, and shortleaf pine	2381
	Virginia pine, see Pine.	
	Virginia State College, Norfolk Division, MDTA program, case-work prevents dropouts	13024
	Virology, see Viruses.	
	Virus diseases, chemical composition of urea-extractable components of plague virus EV, USSR study	20387
	Viruses:	
	intracellular inclusions in hereditary amyotrophic lateral sclerosis, USSR study	9297
	Japanese B encephalitis, pathogenicity of different strains, USSR studies	8939
	laboratory procedures	8040
	oncogenic properties, problems, USSR study	16559
	USSR dissertation	20141
	veterinary virology, all-Union conference, USSR	20047
	virology, USSR studies	9230
	virus-cancer research	11453
	see also names of virus diseases.	
	Visalli, Frances I., iodine-131 in post-mortem human thyroids	20759
	Visas, see Passports.	
	Viscoelastic properties of styrene-acenaphthylene copolymers in transition region	7655
	Viscoelasticity, see Elasticity.	
	Viscosimeters, penetrometer for measuring absolute viscosity of glass	7438
	Viscous flow, see Flow.	
	Viscous mixing of 2-dimensional jets with particular reference to jets in ground proximity	13496
	Vises (tools):	
	machinists' and other bench-mounted, simplified practice recommendation	1497
	Visher, P. N., ground-water resources in southern Oahu, Hawaii	10660
	Vision, see After-images—Eyes—Sight.	
	Visiting housekeepers:	
	homemaker services—broadened horizons, highlights from National Conference on Homemaker Services	19316
	directory, 1963	11553
	history and bibliography	10084
	public welfare	11716
	suggested training program	15860
	homemaker's assistant, suggested training program	15847
	Visitors, national forest campgrounds, estimating number	12470
	see also Tourists.	
	Visual acuity, see Acuity.	
	Visual analysts, see Optical analyzers.	
	Visual binary stars, see Stars.	
	Visual data transmission	13643

# INDEX 1964

	Entry		Entry
Visual perception, <i>see</i> Perception.		Vocational Rehabilitation Administration—Continued	
Visual resolution and optical scintillation over snow, ice, and frozen ground	12344	research and demonstration projects, annotated list, 1964	16912
Vital statistics	3115	vocational rehabilitation clients, adjustment	3184
analytical studies	7705, 9732	vocational rehabilitation programs administered, regulations governing	13510, 20872
birth and death records, United States and outlying areas, where to write	11586, 20772	Vogel, Robert M., engineering contributions of Wendel Bollman	21798
data from national health survey	5666, 7704, 7706, 9733-34, 11583-584, 13423-424, 15071, 16846, 18924-926, 20771, 21859.	Voegelin, Eric, and wife, relief	1865, 2154
programs and collection procedures	11582	Vogler, L. E.: curves of input impedance change due to ground for dipole antennas	5546
provisional, monthly report	3751	lunar surface radio communication study	20640
publications, price list	5643	percentage points of beta distribution	13275
special reports	3116	Vogler, Raymond D., interference effects of single and multiple round or slotted jets on VTOL model in transition	16697
selected studies	1568, 7710	Vohr, John H., photographic study of boiling flow	8063
United States (1960)	5667	Voice, reentry communication system for use in conjunction with radar tracking equipment	16653
natality	5667	Voice of America, doubles its power, new Greenville complex	5738
United States (1961)	5668, 7707	Volcanic ash, tuff, etc.: beryllium-bearing tuff, Honey Comb Hills, Juab County, Utah, mineralogical investigation	9524
mortality	3115, 7707	fossils in Ordovician tuffs, north-eastern Maine	14338
natality	5668	Volcanic rocks, <i>see</i> Igneous rocks.	
United States, 1962	7708-9, 9735	Volcanoes: geology, structure, and mineral deposits of Mount Rose quadrangle, etc.	19788
mortality	7709	Hawaii, 1955	4779
natality	7708	Hawaii, Kilauea, 1961 eruption	14345
<i>see also</i> Life tables.		Hawaii Observatory summary	3568
Vitamins:		Volcanology, publications, list	9768
arginine, l-glutamate, and pyridoxine, effects on toxicity of Aerozine	19182	Volga region, USSR: conference of physiologists, etc.	9115
microbiological dewaxing process yielding protein-vitamin concentrates	18798	poorly planned scientific institutes.	16201
vitamin A, effect on antibody formation following immunization with antigen from <i>Ascaridia galli</i> , USSR study	8924	Volmer, Erwin P., biology of prostate and related tissues	1502
vitamin C, ascorbic acid levels in blood and urine as related to oral health status	1746	Voltages: adjustable, simple circuit with linear temperature variation	9560
Vitreous china plumbing fixtures, recorded voluntary standard of trade	5539	instrument for electronic differentiation of current-voltage characteristics	21760
Vivian, Gordon, excavations in 17th century Jumanos Pueblo Gran Quivira	20660	standing wave ratio modified reflectometer techniques	13354
Vlahovic, Ivanka S., relief	309, 6153, 6396	transmission line construction, specifications and drawings	18932
Vocational counselors, <i>see</i> Counselors.		two-step voltage discharge characteristics of silver-zinc-cells eliminated with auxiliary silver electrode	14826
Vocational Division, bulletins	8479, 8491-92	Voltmeters: dc vacuum tube voltmeter, Hewlett Packard 412A, instrument calibration procedure, technical manual	13360
Vocational education:		dynamometer, instrument calibration procedure, technical manual	11498
act of 1963—		electronic, Hewlett Packard 400C and ME-30/U, instrument calibration procedure, technical manual	13357
law	1939	Volume and yield tables factors for lodgepole pine in Colorado and Wyoming	12481
report	2056	Douglas-fir, growth and yield records from well-stocked stands, summary	8682
area programs, digest of States boards annual reports	576	lodgepole pine	8686
education for changing world of work, report of Panel of Consultants on Vocational Education, summary	2289		
expansion and improvement, appropriations, 1965, supplemental, proposal	19529		
Indians, adult, amend act—			
law	1959		
report	335		
mentally retarded, North High work-study program	612		
trade and industrial curriculum materials, list	8479		
<i>see also</i> subject.			
Vocational guidance, occupational outlook handbook	2961		
Vocational rehabilitation, <i>see</i> Rehabilitation of the disabled.			
Vocational Rehabilitation Administration:			
program administration review, report, 1962	13509		
rehabilitating physically handicapped, advisory groups	16908		
research and demonstration grant, program in aging	7850		

# JANUARY-DECEMBER

Entry	Entry	Entry
	Volume and yield tables—Continued	Wachtel, Dawn A. :
	log grades, analysis technique for	foreign trade regulations—
	testing ----- 2390	Hong Kong ----- 18174
16912	point-sampling factor in southwest-	Philippines ----- 2460
	ern ponderosa pine ----- 790	Taiwan ----- 18184
3184	trees in interior Alaska ----- 2375	Thailand ----- 14378
	yellow-poplar, southern Appalach-	Waco, Tex., Veterans Administration,
	ians ----- 8669	regional office move, GAO re-
0, 20872	Volumetric apparatus for determin-	port ----- 2404
	ing helium content of gas	WACU, see West African Customs
21798	mixtures ----- 21715	Union.
55, 2154	Voluntary foreign aid programs, re-	WADD, see Wright Air Development
	ports of American registered	Division.
	agencies ----- 10711, 15990,	Wage and Hour and Public Contracts
	errata ----- 21375	Divisions:
	Volunteer workers:	explanatory bulletins ----- 7836
5546	and rural poverty ----- 14664	industry pamphlets ----- 1652, 7838
	therapeutic use of student volun-	interpretative bulletins ----- 1653,
20640	teers ----- 17116	3187, 7839, 9875, 11677-679,
	VA psychiatry, new programs ----- 9868	13513, 15146, 16913-914, 19013-
13275	women, new patterns in volunteer	15, ----- 1654,
	work ----- 1542	regulations ----- 5750-51, 7840, 9877, 11680-684,
	Vomitus, human, effects of miscella-	16915-918.
16697	neous wastes on mesophilic	Wage chronology, see Wages.
	activated sludge ----- 20973	Wage-hour act, see Labor standards.
8063	Von Glahn, Uwe H., film-boiling heat-	Wager, J. Alan, relationship between
	transfer coefficients obtained	visitor characteristics and
	with hydrogen, nitrogen and	recreation activities on 2 na-
16653	freon 113 ----- 13230	tional forest areas ----- 785
	Von Stroebel, James M., establishing	Wages:
	business in Argentina ----- 10698	accrued vacation pay, deductibility,
5738	Voprosy filosofii (periodical) :	extend time-----
	translations ----- 2473	law ----- 17412
	Voprosy klinicheskoy onkologii (peri-	reports ----- 13946,
	odical) : ----- 21494	15700, 17616
9524	translations ----- 18317	amend Davis-Bacon act to include
14338	Voprosy psikhologii (periodical) :	fringe benefits-----
	translations ----- 18317	hearing ----- 8452
	VOR, see Omniranges.	law ----- 13897
	Voress, Hugh E., peaceful uses for	reports ----- 2047, 8413
	nuclear explosives, bibliography	building trades in 100 cities, Jan. 2,
	----- 8069	1964 ----- 7421
	Voris, Frank B., medical aspects of	chronology-----
19788	space flight ----- 16658	American Viscose, 1945-63 ----- 21669
4779	Vortex structure of cloud cover ac-	anthracite mining industry,
14345	cording to weather satellite	1930-59 ----- 14689
3568	data ----- 16730	Berkshire Hathaway Inc., 1943-
9768	Vosloh, Carl J., Jr., operating costs	64 ----- 18628
	in packing mixed feeds with	Commonwealth Edison Co. of Chi-
9115	emphasis on labor and capital.	cago, 1945-63 ----- 13042
16201	Vostok, see Satellites.	General Motors Corp., 1939-63 ----- 9377
	Voting:	Lockheed Aircraft Corp., Cali-
1502	constitutional rights, enforce right	fornia Company, 1937-64 ----- 21667
	to vote, hearings ----- 6514	Massachusetts shoe manufactur-
9560	participation and voter registra-	ing, 1945-64 ----- 20432
	tion, Commission report ----- 3091	Sinclair Oil Companies, 1941-
	time off for voting under State	63 ----- 20433
21760	laws ----- 14670	Swift & Co., 1942-63 ----- 11273
	see also Elections.	Western Greyhound Lines, 1945-
13354	Vouchers:	63 ----- 14688
	statistical sampling procedures in	Western Union Telegraph Co.,
18932	examination, permit-----	1943-63 ----- 21666
	hearing ----- 12136	earnings series, manufacturing,
	law ----- 17380	summary ----- 2950, 9378, 14685
	reports ----- 15534, 17745	EEC, Great Britain, and U.S., com-
14826	Voutsikas, Demitrios, see Dousopou-	parative costs and trade advan-
	las, Demetrios. ----- 7835	tages ----- 10305
	VR-ISC series ----- 7835	employee earnings, metropolitan
	VTOL, see Aircraft—Airplanes.	areas of South, June 1961-June
	Vulcanology, see Volcanology.	1962 ----- 16608
13360	Vulin, Sime D., relief ----- 15646	employee earnings, retail trade,
	Vultures, American, general informa-	June 1962 ----- 1376
	tion ----- 16859	apparel and accessory stores ----- 13059
11498	VZ-2, see Aircraft.	furniture, home furnishings, and
		household appliance stores ----- 13060
		general merchandise stores ----- 9455
		employer expenditures for selected
13357		supplementary compensation
		practices for production and
		related workers-----
12481		manufacturing industries, 1962 ----- 20443
		meatpacking and processing in-
8682		dustries, 1962 ----- 14706
8686		



# INDEX 1964

	Entry		Entry
Wages—Continued		Wages—Continued	
employment and earnings (periodical)	3433	occupational surveys—continued	
employment and earnings statistics for States and areas, 1939-63	18629	Beaumont-Port Arthur, Tex.	18630
fair labor standards act—		Birmingham, Ala.	16596
computing overtime pay, as amended, 1961	20875	Boise, Idaho	20439
coverage—		Boston, Mass.	7405
construction industry	11678	Buffalo, N.Y.	9466
general provisions	11677	Burlington, Vt.	13064
equal pay for equal work	13513	Canton, Ohio	16597
forestry or logging operations, application	16913	Charleston, W. Va.	14699
persons engaged by Federal contractors to furnish cleaning services, etc., to Federal agencies, provide		Charlotte, N.C.	14697
hearings	12127	Chattanooga, Tenn.-Ga.	1382
report	12112	Chicago, Ill.	16599
poultry and egg business, application	7838	Cincinnati, Ohio-Ky.	14700
Puerto Rico, minimum rates	15148	Cleveland, Ohio	7400
reference guide	13512	Columbus, Ohio	7414
farm labor market developments	3459	Dallas, Tex.	7404
employment and wage supplement	3460	Davenport-Rock Island-Moline, Iowa-Ill.	7401
firefighters, overpayments made by Forest Service—		Dayton, Ohio	11281
GAO report	8727	Denver, Colo.	9467
validate, report	15512	Des Moines, Iowa	13061
hourly, index for hydraulic turbine establishments	3587	Detroit, Mich.	11284
hours and earnings, labor force monthly report	3745	Fort Worth, Tex.	7408
industry survey—		Green Bay, Wis.	1381, 20441
communications	5438	Greenville, S.C.	16601
cotton textiles	20437	Houston, Tex.	18639
eating and drinking places	16806	Indianapolis, Ind.	9463
hospitals	16611	Jackson, Miss.	11282
iron and steel foundries	2965	Jacksonville, Fla.	9465
laundries and cleaning services	16607	Kansas City, Mo.-Kans.	9459
machinery manufacturing	9468	Lawrence-Haverhill, Mass.-N.H.	18634
meat products	13073	Little Rock-North Little Rock, Ark.	1380
synthetic textiles	20438	Los Angeles-Long Beach, Calif.	16592
women's and misses' dresses	9469	Louisville, Ky.-Ind.	13067
manufacturing industry, developments, summary release	4134	Lubbock, Tex.	18633
minimum—		Manchester, N.H.	1378, 20442
civil service examination announcement, amendment	6077	Memphis, Tenn.	11276
coverage of domestic workers, present status	19036	Miami, Fla.	9462
District of Columbia law, amend—		Milwaukee, Wis.	14698
hearings	6347, 6504	Minneapolis-St. Paul, Minn.	11280
report	17805	Muskegon-Muskegon Heights, Mich.	16603
establishing, State law, suggested language	13037	New Haven, Conn.	11278
extend fair labor standards act coverage, hearings	15586	New Orleans, La.	11283
50 States, District of Columbia, and Puerto Rico, status	13549	New York, N.Y.	18631
restaurants and other food service enterprises, extending	5752	Newark and Jersey City, N.J.	13066
State laws and orders, analysis of rates and coverage	1663	Norfolk, Portsmouth and Newport News, Hampton, Va.	18635
State laws, summaries	14673, 16581	Oklahoma City, Okla.	1379, 21671
net spendable earnings, monthly release	3783	Omaha, Nebr.-Iowa	7403
occupational earnings in major labor markets, 1963-64	14711, 18643	Paterson-Clifton-Passaic, N.J.	16595
occupational groups in metropolitan areas, trends	20448	Philadelphia, Pa.-N.J.	9464
occupational surveys—		Phoenix, Ariz.	14696
Akron, Ohio	18638	Pittsburgh, Pa.	11279
Albany-Schneectady-Troy, N.Y.	14695	Portland, Maine	7411
Albuquerque, N. Mex.	16594	Portland, Oreg.-Wash.	16600
Allentown - Bethlehem - Easton, Pa.-N.J.	18068	Providence-Pawtucket, R.I.-Mass.	16598
Atlanta, Ga.	18632	Raleigh, N.C.	2963, 21672
Baltimore, Md.	7413	Richmond, Va.	7412
		Rockford, Ill.	16593
		St. Louis, Mo.-Ill.	7410
		Salt Lake City, Utah	9461
		San Antonio, Tex.	16604
		San Bernardino-Riverside-Ontario, Calif.	5437, 21673
		San Diego, Calif.	7402
		San Francisco-Oakland, Calif.	11277
		Savannah, Ga.	16602
		Scranton, Pa.	2964, 20440
		Seattle, Wash.	7399
		Sioux Falls, S. Dak.	7409
		South Bend, Ind.	14694
		Spokane, Wash.	18636
		Toledo, Ohio	13063
		Trenton, N.J.	9460
		Washington, D.C.-Md.-Va.	7406
		Waterbury, Conn.	13065
		Waterloo, Iowa	7407, 9458
		Wichita, Kans.	1383
		Worcester, Mass.	18637
		York, Pa.	13062

# JANUARY-DECEMBER

Entry

8630	overtime compensation under fair labor standards act.....	9875
6596	overtime pay—	
0439	basic rates for computing under fair labor standards act.....	7836, 9877
7405	increase rate, hearings.....	17645, 19505
9466	payment and collection, State law, suggested language.....	14683
3064	private economy and private non-farm sector, comparison of payments, prices, etc., 1947-62.....	10615
6597	publications, list.....	3787
4699	radio and television station employees, exemption from overtime pay under FLSA.....	3187
1382	railroad employees, class 1.....	4135
6599	seafaring wage rates, Atlantic, Gulf and Pacific districts.....	14726
4700	self-employed workers under social security.....	16863
7400	shipyards, straight-time hourly earnings, indexes of change, monthly.....	3588
7414	States—	
7401	equal pay laws, digest.....	13541
1281	minimum laws, summary.....	11256
9407	payment and collection laws, summary.....	13033
13061	prevailing laws, summary.....	11257
11284	State unemployment insurance laws, workers covered.....	3434
7408	structure of production administration and wages in sovkhos, translations on USSR labor.....	19028
20441	telephone company employees, FCC rules and regulations.....	3995
16001	union—	
8659	building trades.....	13071
9463	local transit operating employees.....	11285
1282	motortruck drivers and helpers.....	14701
9405	printing industry.....	14702
9459	wage and salary stabilization programs in post-attack emergency.....	12331
18634	wages and related benefits—	
1380	82 labor markets, 1962-63.....	7374
16592	metropolitan areas, United States and regional summaries, 1962-63.....	16590
13067	wholesale grocery business, Federal wage-hour law application.....	1652
18633	women, equal pay—	
20442	act of 1963, legislative history.....	10308
11276	action for equal pay.....	13538
9462	facts.....	13548
14698	member nations of I.L.O.—	
11280	what principle means, questions and answers.....	5768
16603	what you want in State bill.....	16925
11278	see also Cost of living allowances.....	20888
1283	Wages and Industrial Relations Division, publications list.....	3787
18631	Wagner, C. A., drift of 24-hour equatorial satellite due to earth gravity field through 4th order.....	7515
13066	Wagner, Richard D., Jr.: induced pressures and shock shapes on blunt cones in hypersonic flow.....	9584
21671	Reynolds number effects on induced pressures of cylindrical bodies with different nose shapes and nose drag coefficients in helium.....	1486
7403	Wagoner, Joseph K., cancer mortality patterns among U.S. uranium miners and millers, 1950-62.....	15044
16595	Wai Chan Cheng Liu, see Liu, Wai Chan Cheng.....	
9464	Walakea Arboretum, species trials at Hilo, Hawaii.....	8687

Entry

Walt, James R.: calculated diffraction effects at VLF from localized ionospheric depression.....	7580
calculations of field near apex of wedge surface.....	3051
theory of radiation from slotted conducting plane in plasma environment.....	20641
Wake Island, labor organizations, reporting, register.....	16574
Walburg, Charles H., fish population studies, Lewis and Clark Lake, Missouri River, 1956-62.....	12427
Wald, Elizabeth E., execution of LGP-30 machine-language codes on NAREC computer.....	13325
Waldron, Kenneth D., fish schools and bird flocks in central Pacific Ocean, 1950-61.....	15930
Walker, C. J., feasibility of inert-gas cushions in gas storages.....	18705
Walker, Charles K., toxicity of antimycin A to fish, etc.....	19721
Walker, David D., tungsten resources of western Montana.....	2996
Walker, Eugene H.: ground water in Midvale and Council areas, upper Weiser River basin, Idaho.....	8783
ground water in Sandpoint region, Bonner County, Idaho.....	15968
subsurface geology of National Reactor Testing Station, Idaho.....	12503
Walker, G. O., soil survey, Wabash County, Ill.....	9776
Walker, George W., geology of uranium-bearing veins in conterminous United States.....	4797
Walker, James F., job performance of Federal mail sorters by age.....	9477
Walker, Robert H.: basic data on economy of Belgium—foreign trade regulations of Belgium-Luxembourg.....	8822, 8830
Walker, Russell G., celestial background radiation, bolometric corrections.....	13626
Walkingstick, defoliator of deciduous trees, general information.....	12434
Wall-pressure fluctuations and pressure-velocity correlations in turbulent boundary layer.....	9614
Walla Walla County, Wash., soil survey.....	9775
Wallace, J. D., and Co., Inc., relief.....	2015, 6413, 8210
Waller, Roger M., hydrology and effects of increased ground-water pumping in Anchorage area, Alaska.....	15965
Wallis, James K.: area burned by wildfire in California watersheds, 1940-59.....	8666
logging for water quality in northern California.....	8662
Walls: panel-type construction.....	18
variable-transparency wall regulates temperatures of structures.....	14811
Walnut anthracnose.....	14299
Walnuts, growing black walnuts for home use.....	30
Walpole, Norman C., Army area handbook, Germany.....	19212
Walrath, Lawrence K., nomination, hearings.....	8442
Walsh, Robert M., food supplies available in case of national emergency.....	17902
Walter, Francis E., memorial services.....	231
Walter, L. S., vapor pressure, etc., of tektite melts.....	20570

Do not order from index; see indicated entry

Page 663

# INDEX 1964

	Entry		Entry
Walters, Jack G., correlation of ASTM and Micum coke test methods	16633	Warfare, <i>see</i> Air warfare—Atomic warfare—Chemical warfare—Guerilla warfare—War.	
Walters, Kenneth L., geologic reconnaissance and test-well drilling, Cordova, Alaska	827	Warm air furnaces, <i>see</i> Furnaces.	
Walters, Lillie C.: computation of modified Fresnel integral arising in theory of diffraction by variable screen	21784	Warner, Donald F., summer sessions in colleges and universities of United States, 1960	4649
numerical calculations for reflection of electromagnetic waves from lossy magnetoplasma	1499	Warner, O. Roy, commitment to youth, report on 5 years of progress in guidance, etc., under national defense education act	17913
Walters, Roger E., experimental dual track conveyor system for processing poultry	9948	Warning systems: emergency broadcast system (EBS) plan	8153
Walton, Thomas E., jr., mass-transfer cooling on blunt cone	9588	national warning system (NAWAS) operations manual	8152
Wang, Kung-Lee, review of mineral industries (metals and non-metals except fuel)	2997	Warrant officers, <i>see</i> Coast Guard Reserve.	
Wann, Marie D., background, etc., population and housing census evaluation and research program	185	Warren, Bruce H., exclusion of angular accelerations as principal cause of visual illusions during parabolic flight maneuvers	79
War:		Warren, Carlos S., radiation dosimetry aboard spacecraft of 8th Mercury-Atlas mission (MA-8)	18731
Africa, journey through 5 wars, translations	12768	Warren, Earl, eulogy delivered Nov. 24, 1963 for John F. Kennedy	2132
unconventional warfare, bibliography	20934	Warren Commission, <i>see</i> President's Commission on Assassination of President John F. Kennedy.	
war against poverty, American Indian (address)	10670	Warren County, Pa., hydraulic fracture treatments in glade and Clarendon oil reservoirs	14753
war and peace, North Vietnam article	9040	Warrilow, Lynette M., and child, relief	17496
<i>see also</i> Peace.		Warsaw, Poland, Radio and Television Design Office, activities in last 5 years	12060
War between the States, <i>see</i> Civil War, 1861-65.		Warships: aircraft carriers, evolution	21820
War claims, <i>see</i> Claims.		loans to friendly countries, extend—	
War claims act, <i>see</i> Claims.		law	17296
War plants, <i>see</i> Plants (Industrial).		reports	10271, 15730
War Plants Corporation, <i>see</i> Smaller War Plants Corporation.		nuclear propulsion for naval surface vessels, hearings	4423
War risk insurance: construction-subsidized vessels, coverage, remove certain limitations—		Wasatch Mountains: Little Cottonwood and Bells Canyons, glaciation	15950
law	17337	northern, blister rust found on limber pine	16935
report	15551	Washers (metal): indium foil with beryllia washer improves transistor heat dissipation	11368
War ships, <i>see</i> Warships.		Washchek, Jack N.: water supply outlook and Federal-State-private cooperative snow surveys—	
Ward, Helen L.: radioisotopes in agriculture	15283	Colorado and New Mexico	4138
subject index to effects of radiation on mammalian eye	21015	Colorado and Wyoming, special report	13460
Ward, James C., sugar maple veneer logs should be graded for pith flecks	12459	Colorado early season snow report	3141
Wardrobes, wood, executive office, Federal standard, cancellation	6690	Washington, George, papers, Index	18652
Ware, George M., delta-wing recovery device for nonlifting spacecraft	14881	Washington, George, Birthplace National Monument, <i>see</i> George Washington Birthplace National Monument.	
Ware, Glen C.: cobalt	18661	Washington, D.C., <i>see</i> Capital of United States—District of Columbia.	
nickel	18674	Washington, Mo., redevelopment area, opportunities for economic growth	11823
Warehouse examiners, examination announcement	13809	Washington Channel, bridge, designate Francis Case Memorial Bridge, report	15782
Warehouses: cotton, increasing storage capacity in older structures	9912	Washington County, Nebr., soil survey report	20804
grocery, breakage and damage	11770		
institutional wholesale warehousing, improving	7928		
lighter door to ease strain for potato warehousemen	7886		
loading out produce, 3 methods	11773		
multiple-occupancy, for poultry and egg wholesalers, improved designs	7929		
refrigerated, capacity, Oct. 1, 1963	18987		
wholesale, storing fruits and vegetables on pallets	4209		
<i>see also</i> Bonded warehouses.			

Entry	Entry	Entry
	Washington Metropolitan Area Transit Commission: determine D.C. Transit System, Inc., net operating income— law ..... 1941 reports ..... 380,481	Waste products: disposal— aerobic waste digesters, hes- tianic acid pigments, biologi- cally resistant ..... 1743
4649	Washington National Airport: annual report, 1963 ..... 13278 concessions, increase periods for agreements, hearing ..... 21206	subsurface, industrial wastes in United States ..... 14736
17913	Washington State: annual survey of manufactures, 1962, standard metropolitan statistical areas and large in- dustrial counties, statistics ..... 8104	undiluted human waste, treat- ment by activated sludge pro- cess ..... 19146
8153	BLM at work ..... 13089	effects of miscellaneous wastes on mesophilic activated sludge, soaps, detergents and vomitus ..... 20973
8152	climatological data ..... 3329	municipal waste facilities, in United States, 1962 inventory ..... 3101-9
	Christmas tree harvesting and mar- keting regulations ..... 10586	statistical summary ..... 15068, 16834
	coast pilot ..... 1850	PHS advanced waste treatment re- search program ..... 13391
79	electric rate book ..... 672	pollution treatment works, con- struction assistance— hearings ..... 8395
	fishery products, wholesale deal- ers, list ..... 18021	print additional copies, re- ports ..... 2101, 2199
	labor organizations, reporting, reg- ister ..... 16574	reports ..... 4530, 17627
18731	landings, fish and shellfish, annual summary, 1963 ..... 8594	slabs, edgings, and trims utiliza- tion ..... 12452
2132	mineral industry, minerals yearbook chapter ..... 1426	solid waste disposal, public health aspects, research needed ..... 13415
	municipal waste facilities, 1962 inventory ..... 3109	subsurface disposal of industrial wastes in U.S. ..... 11315
14753	municipal water facilities ..... 18914	synthetic detergents in wastes, bib- liography ..... 7690
17496	natural resources ..... 2443	waters from radiochemical labora- tories, etc., decontamination, USSR studies ..... 20366
12960	Pacific slope basins, floods, magni- tude and frequency ..... 10658	see also Radioactive substances.
21820	precipitation data, hourly ..... 3578	Watauga Stone Co., Watauga Lime- stone Quarry, crushed lime- stone operations ..... 1405
	surface water records, Oct. 1950- Sept. 1960 ..... 14354	Watches, see Clocks and watches.
	water supply outlook and snow sur- veys ..... 4144	Water: accidents, medical aid to victims, USSR study ..... 21652
	western— seasoning and surfacing degrade in kiln-drying western hem- lock ..... 8655	announcement of water-resources reports ..... 3255
1, 15730	timber trends ..... 8683	Arizona, supply outlook ..... 4137
4423	women, legal status ..... 9891	artesian, in Malabar coastal plain, southern Kerala, India ..... 12518
	see also Yakima project.	artificial recharge of ground water, Grand Prairie region, Ark. (se- ries) ..... 817
15950	Washington State Conference on In- dustrial Modernization, pro- ceedings, Mar. 31, 1964 ..... 13745	bacteria of layer waters, oils and rocks of oil deposits in USSR ..... 2589
16935	Washington Terminal Co.: exempt from District of Columbia sales tax act— law ..... 17422	bond sales, 1963 ..... 16847
11368	reports ..... 15495, 17750	Bulgaria, regional breakdown of ir- rigated areas on basis of in- dices of aridity and natural water supply ..... 12951
	Washita River Basin project, Fort Cobb Dam, design and con- struction ..... 1574	Brookhaven National Laboratory vicinity, Suffolk County, N.Y., chemical quality ..... 19772
4138	Washoe County, Nev.: regional geology ..... 19788	California's water yield from snow zone land, management ..... 8688
13460	Truckee Meadows area, hydrogeol- ogy and hydrogeochemistry evaluation ..... 18151	carbon-14 dating, preparation of sample ..... 802
3141	Waspaloy, mechanical properties at 800°, etc., for use in super- sonic transport ..... 18718	Chapman, Nebr., proposed water- fowl refuge, chemical quality ..... 15966
18652	Wasson, James A., secondary oil re- covery possibilities, Cow Run sand, Burning Springs pool, Wirt County, W. Va. ..... 14745	chemistry of manganese in natural water (series) ..... 6817-18
	Wasson, John T., radioactivity in Sputnik 4 fragment ..... 16097	clean water is everybody's business, filmstrip and speaker's guide ..... 13420
11823	Wasson, P. A., conversion of hematite to magnetite with solid re- ductants ..... 5485	cold, effects on digital blood flow of immersion of hand ..... 20955
15782	Waste disposal, see Radioactive waste disposal—Sewage—Waste products.	Colorado and New Mexico, supply outlook ..... 4138
20804		Colorado, early season snow re- port ..... 3141
		Colorado, Rio Grande, Platte and Arkansas River drainage ba- sins, supply outlook ..... 4138
		Colorado River, lower, watershed conditions affecting ..... 3639



# INDEX 1964

	Entry
Water—Continued	
Columbia River basin—	
discharge at gaging stations, etc.	4058
resources, cooperative develop-	
ment, treaty and related agree-	
ments with Canada	21881
storage in major power, reser-	
voirs, monthly report	4058
conservation—	
abstracts of material published	1679,
7890, 9916, 15197,	20898
activities for Boy Scouts	16964
facts	11776
list of publications	5641
need for fund (remarks)	1534
tax treatment, amend act, re-	
port	19579
teaching, classroom and field	
guide	9960
content of micas and chlorites	12512
control, TVA, valley of light,	
1933-1963	21904
cortical regulation of water and	
electrolyte balance, USSR	2891
study	6816
Cretaceous and Pleistocene aquif-	
ers	
Delaware River Basin and southern	
New Jersey, supply character-	
istics of streams	824
delivery to Mexico, special studies	15077
desalination and simultaneous gen-	
eration of electric power by	
nuclear power, USSR (ad-	
dress)	20026
drainage water sanitation, USSR	
studies	933
drinking, safe in emergencies	11558
facts	11776
Federal-State-private cooperative	
snow surveys, Colorado and	
Wyoming, special report	13460
field measurement of alkalinity	4805
focus on clean water, action pro-	
gram for community organiza-	
tions	13397
for honey bee colony	15210
fresh water components radioiso-	
tope distribution, USSR study	1070
fresh water systems, radionuclides	
transport, report	129
general ground-water techniques	
(series)	2425
geochemistry of natural waters of	
Blue Grass region, Ky	14350
geochemistry of water (series)	4805,
	15954
ground water—	
Acoma and Laguna Indian Reser-	
vations, N.Mex., availability	12514
alluvium of Arkansas River be-	
tween Little Rock and Fort	
Smith, potential	823
Anchorage area, Alaska—	
effects of increased pumping	15965
resources	15964
Arkansas, eastern, vicinity of	
U.S. Highway 70, resources	19802
Arkansas River Valley, Ark	8780
Arkansas Valley region, Ark.,	
resources	2434
artesian pressure decline and	
land subsidence	10661
artificial recharge—	
Grand Prairie region, Ark.	
(series)	4809
Roswell Basin, N.Mex	19805
studies	8781
Bengasi area, Cyrenaica, United	
Kingdom of Libya, resources	6823
Bhachau area, Kutch, India, with	
reference to Kandla Port	
supply	815
Bluewater Springs area, Carbon	
County, Mont	15969,

	Entry
Water—Continued	
ground water—continued	
Bradley, Calhoun and Ouachita	
Counties, Ark., resources	12528
Cache la Poudre River basin,	
Colo., investigations	6821
Camp Ripley Military Reserva-	
tion, Morrison County, Minn.	4813
Cedar Rapids division, lower	
Platte River basin, Nebr.	19800
Chapman, Nebr., proposed water-	
fowl refuge area, conditions	15966
chemical quality	19795
Clark County, Wash., conditions,	
with description of major al-	
luvial aquifer along Columbia	
River	12517
Connecticut, north-central, re-	
sources	8782
Cordova, Alaska, geologic recon-	
naissance and test-well drill-	
ing	827
Crook County, Wyo., resources	19795
Dickson, Lawrenceburg, and	
Waverly areas, Tenn., geology	19799
Edison-Maricopa area, Kern	
County, Calif	15957
Farmington-Granby area, Conn.	10654
Fort Hall Indian Reservation,	
Idaho, irrigation	2426
Fort Rock Basin, Lake County,	
Oreg	19783
Fountain and Jimmy Camp Val-	
leys, El Paso County, Colo.,	
resources	12516
fresh, relation of salt water	
(series)	19792
galleries, use for development of	
shallow supplies	18152
geochemistry in mine drainage	
problems	2423
Grand Prairie region, Ark	816
Grande Ronde River basin, Union	
County, Oreg., resources	8776
Green Bay area, Wis.	6819
Hartford-New Britain area,	
Conn., resources	10649
hydraulics (series)	2424
hydrology, laboratory and field	
methods, bibliography	12529
Lee and Sumter Counties, Ga.,	
resources	2432
levels in United States, 1957-61,	
North Central States	21363
Los Alamos area, N. Mex., re-	
sources	19798
Lowell area, Mass., resources	10657
Luke area, Maricopa County,	
Ariz	14356
Lyon County, Minn	818
McMullen Valley, Ariz., re-	
sources	4811
Maine, conditions	825
Mesilla Valley, Tex. and N. Mex.	4815
methods of collecting and inter-	
preting data	2425
Midvale and Council areas, upper	
Welser River basin, Idaho	8783
Mirage Flats, Nebr., resources	21362
Montgomery County, Ala., re-	
sources	6812
movement	9744
Naval Air Missile Test Center	
area, Point Mugu, Calif., ap-	
praisal	2427
New Castle County, Del., re-	
sources	4823
New Hampshire, southeastern, re-	
sources	19794
Nobles and Jackson Counties,	
Minn., resources	18146
Oahu, Hawaii, resources	10660
Pecos River between Acme and	
Artesia, N. Mex., appraisal	8779

	Entry
Water-Continued	
ground water-continued	
primer	803
Rainbow Valley and Waterman Wash areas, Maricopa and Pinal Counties, Ariz.	4814
Redwood Falls area, Redwood County, Minn.	15958
Richardson County, Nebr., resources	21360
Rio Grande Valley area, Tex., resources	14348
Rock County, Wis., resources	2428
Sailor Creek area, Owyhee, Elmore, and Twin Falls Counties, Idaho, reconnaissance	15944
St. Croix, V.I.	820
San Antonio Creek Valley, Santa Barbara County, Calif.	12520
Sandpoint region, Bonner County, Idaho	15968
San Joaquin Valley, Calif.	18115
Savannah area, Ga.-S.C., resources	4808
Sirte area, Tripolitania, United Kingdom of Libya	6824
Snake River basin, Idaho, irrigation use	15956
South Platte River basin in western Adams and southwestern Weld Counties, Colo., resources	12519
specific yield, column drainage and centrifuge moisture content	819
studies and electric analog models	18119
Texas, southern high plains, summary of occurrence and development	8781
turbulent flow	6805
Umatilla River basin, Oreg.	8777
Uvalde County, Tex., resources	10652
Verde Valley, Mogollon Rim region, Ariz., resources	2419
Washington, D.C., and vicinity, resources	12527
Waupaca County, Wis., resources	10656
Wichita area, Kans., resources	10650
Wilmington-Reading area, Mass.	18141
Yuma County, Colo., resources	10651
human body requirements, effect of ventilating air flow	1744
Idaho, supply outlook	4139
Indus Plain, development, report	21837
infiltration and drainage in uniform sands (series)	6805
infiltration of weathered crystalline rocks, Georgia Nuclear Laboratory, Dawson County, Ga.	8753
injected in waterfloods, evaluation of quality by filter methods	11332
interstate carrier, supplies, by States and Public Health Service regions, inventory	7698
interstitial balance in dogs after lethal thermal burn, problem, USSR study	14474
irrigation, soil-plant-water relationship	11612
Lake Mead, supply outlook	3639
land and water conservation fund, establish	
hearing	15809
law	17436
reports	341, 12064, 17713, 17619

	Entry
Water-Continued	
land and water conservation fund act of 1965	
implementation (remarks)	21829
land mark in legislation (remarks)	18870
policies and procedures (remarks)	18871
liquid state, infrared absorption spectrum	14918
logging for water quality in northern California	8662
magnetic treatment, physical and chemical fundamentals, USSR study	16472
maximum water-equivalent values of March snow cover in north central U.S., frequency	21922
minerals yearbook chapter	20517
monolayers behavior of progressively fluorinated fatty acids adsorbed on water	5592
Montana	
resources	2240
supply outlook	4140
multiple-purpose projects, uniform policies with respect to recreation, etc., cost allocations	
hearings	6361
report	6304
municipal, etc., contracts under reclamation project act, repayment, compilation	17669
print as Senate document, report	17706
municipal facilities, inventory	18906-914
Nevada	
fall summary, 1964	20802
supply outlook	4141
North Carolina streams, water-supply characteristics	2435
Oregon	
supply outlook	4142
summary, 1928-61	3136
Pacific Northwest	
current discharge at selected stations	4058
month-end storage in major reservoirs	4058
water resources	
summary	3831
weekly report	3832
Pacific Southwest water plan	9745-47
hearings	14142
Interior Dept., fact sheet	7719
Pecos River Basin, reduce nonbeneficial consumptive use	
law	19402
report	15494
petroleum refining industry, requirements	813
pH values, effect on growth and propagation of Eucyclops serulatus	9011
Public Health Service supply and pollution control program, report, 1964	18891
pulsed water jet, use for destruction of rocks, results	8903
quality	
control, storage and retrieval of data	15069
Delaware River at Trenton, N.J., management, comprehensive planning (address)	19803
national network	5648
radium, determination	5659
relation of salt water to fresh ground water (series)	14349
replenishing underground supplies on farm	10653
requirements, selected industries (series)	20925
reservoir, self-purification of cesium-137, USSR study	813
	18359

# INDEX 1964

	Entry
Water—Continued	
resources—	
Albany-Schectady-Troy area, N.Y.	4800
Baltimore area, Md.	8775
Colorado River, upper basin, basic data	19786
Flint area, Mich.	4801
Green Bay area, Wis.	4802
industrial areas (series)	4800-1, 8775, 10649-650
industrial regions (series)	4802
Mississippi embayment (series)	12511
Nevada	17668
print as Senate document, report	15690
projects, determination of area redevelopment benefits	9995
research, Federal program for 1965	9755
review, monthly	4136
Southwest, effects of drought	4787
technical publications	9743-44, 9749, 11593
resources planning act—	
hearings	12140
reports	494, 17621
resources research, establish centers, etc.—	
law	15396
reports	6280, 10248, 13958
ruby laser light transmission	5597
saline—	
demineralization by electrically-induced adsorption on porous carbon electrodes	8802, 10676
research and development progress reports	845-848, 6835-36, 8798-8802, 10673-680, 15974, 18162-163, 19813-816
thermodynamic properties	19814
saline conversion—	
bibliography	847
conversion by freezing, research demonstration plant—	10679
Freeport, Tex., report	19813
Webster, S. Dak., report	18162
desalination by electrosorption and desorption	18163
ice solidification and separation	10677
Koppers hydrate process, experimental and engineering studies	10674
membrane technology, bibliography	848
nuclear power use for production of fresh water from sea water, hearings	21159
report, 1963	8797
reverse osmosis	6835
pilot plant design	6836
research and development test station, Wrightsville Beach, N.C.	18164
salt concentration at phase boundaries in desalination processes	10678
thin film vapor compression system	10673
vapor reheat and liquid-liquid heat exchange	845
Salt Creek basin, Nebr., sedimentation and chemical quality	822
sanitation facilities for Indians, PHS authority under P.L. 86-121	15064
sensitivity tests, use in estimating formation damage, Patrick Draw area, Wyo.	18702
shallow, wave generators, wave-height prediction	12341
sources of mineral constituents from granitic rocks, Sierra Nevada, Calif. and Nev.	12513
Southwest, future	18120
springs of east Tennessee	826

	Entry
Water—Continued	
State urban policy	9728
stock-water development in southeastern Idaho, hydrology	814
studies of flow over weirs and dams (series)	6813
subcooled, flowing under conditions of zero gravity instability effect on 2-phase heat transfer	21771
supply and quality management in Columbia River Basin project	11552
supply, needs, etc., facts	11776
supply problems in RSFSR	16039
surface water—	
chemical analyses, continental United States and Puerto Rico, 1961, inventory	6827
chemical quality—	
Brazos River basin, Tex.	18149
Grand River drainage basin, N. and S. Dak.	18148
Saline River basin, Kans.	4810
West Branch Susquehanna River basin	4824
chlorinated hydrocarbon pesticides, identification and measurement	20758
color removal—	
by carbon filter	4242
by hypochlorite	20956
Colorado River basin	15961
Cumberland and Tennessee River basins	15959
Hudson Bay and upper Mississippi River basins, Oct. 1950-Sept. 1960	18144
hydrology of coastal basins of northern California	12526
lower Mississippi River basin, Oct. 1950-Sept. 1960	18145
Ohio River basin except Cumberland and Tennessee River basins	12522
Pacific slope basins in California	19796
quality for irrigation, Western States	4819
quality, United States, 1958	6811
St. Lawrence River basin	18143
solar radiation, long wave and reflected, methods to compute data	8763
South Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River	10659
storage, use of ground-water reservoirs, San Joaquin Valley, Calif.	6814
United States, compilation of records, Oct. 1950-Sept. 1960	4820-
22, 10659, 12522-523, 14351-355, 15959-961, 18142-145, 19796.	
upper Black Earth Creek basin, Wis.	821
temperatures and stream flow data, Convict Creek, Calif.	10577
urban supply, State and local authority to provide orderly development	11578
Utah—	
resources	8451
supply outlook	4143
utilities, service-pipe requirements, 1950-80	19280
Washington, D.C., and vicinity, chemical quality	12527
Washington State, supply outlook	4144
waste, disposal at Federal installations, report	15527
Water supply of Indian reservations (series)	12514
water supply papers	813-828, 2424-35, 4799-4824, 6811-27, 8774-83, 10648-661, 12513-529, 14348-357, 15954-969, 18139-152, 19791-805, 21357-364.

Entry

9728		Entry
814	Water—Continued	
6813	western development, summary of resources, projects, plans, and studies relating to western and midwestern U.S.	21243
21771	western U.S.—fall water supply summary, 1964	21877
11552	including Columbia River drainage in Canada, supply outlook	4145
11776	what you can do for clean water	13425
16039	Wyoming, supply outlook	4146
6827	yield from soil-block lysimeters planted to small trees, etc.	6751
18149	see also Heavy water—Hydrogeology—Precipitation—Sea water—Seepage.	
18148	Water birds:	
4810	Alaska, annual report, 1961	2333
4824	game, reserves in USSR at present time and in recent past distribution	14464
20758	hunting, possession, transportation, importation, Federal regulations, 1964-65	15925, 19734
4242	proposed refuge area near Chapman, Nebr., ground-water conditions	15966
20956	status report, 1963	8625
15961	Water carriers:	
15959	deep sea domestic waterborne traffic—	
18144	1957-61	4874
12526	1958-62	14400
18145	revenue and traffic quarterly	3979
12522	transport statistics, 1962	6874
19796	water carriage ton-miles, 1962	10494
4819	Water fowl, see Water birds.	
6811	Water hemlock, livestock poisoning in Western States, reducing losses	20915
18143	Water plants, see Aquatic plants.	
8763	Water pollution:	
10659	acid mine, affecting fish and wild-life, extent	17998
6814	building for clean water—progress report, 1963	5646
4820-	report, 1964	20744
351-355, 9796.	clean water is everybody's business, speaker's guide to filmstrip	13420
821	contamination and self purification of River Oka, USSR study	20217
10577	control—municipal waste facilities, 1962 inventory	3101-9
11578	research and field laboratories, establish	11573
8451	research and training grants—1963 awards, list	7711
4143	1964 awards	21860
19280	control act, amend—	
12527	hearings	8395
4144	print additional copies, reports	2101, 2199
15527	reports	4530, 17627
12514	control and abatement—hazardous substances removal, reimbursement of Government expenditures, report	15524
813-828, 6811-27, 513-529, 18139-364.	national survey, hearings	14004, 17652
	controlling acid mine drainage, report	410
	Delaware River Basin, control and abatement, hearing	17652
	determining pollutant distribution in tidal estuaries	19791
	disposal of waste water at Federal installations, report	15527
	echinococcus eggs, determining pollution of surface waters	19147
	effects on molluscan shellfish, hearings	405
	fish kills, 1963	13414

Entry

Water pollution—Continued	
lateral turbulent diffusion at surface of alluvial channel	18124
laws, compilation	12144
municipal waste facilities in United States, 1962 inventory, statistical summary	15068, 16834
outdoor recreation, policy	15032
Public Health Service control program, report, 1964	18891
Public Health Service Midwest Regional Control Laboratory, report of Institutional Cooperation Committee	9724
St. Lawrence Seaway, etc., cooperative arrangements to reduce hearings	17663
reports	10221, 15704
seas, by oil, international convention for prevention, amendments, report	10366
study, staff report	10437
synthetic detergents in water, bibliography	7690
USSR, protection against sea pollution, draft regulations	7117
what industries can do for clean water	13425
Water Pollution Control Advisory Board, establish, report	17627
Water Pollution Control Laboratory, Midwest Regional, see Midwest Regional Water Pollution Control Laboratory.	
Water power, developed and potential, of U.S. and other countries of world, 1955-62, summary	18123
Water purification:	
biological methods of purifying industrial sewage from enterprises engaged in organic synthesis, effectiveness, USSR study	7058
equipment, Federal item identification guides for supply cataloging	12292
supplements	3473
recycling system for use in sealed environments	75
Water Research Center, Robert S. Kerr, see Robert S. Kerr Water Research Center.	
Water Resources Council:	
establish—	
hearings	12140
reports	494, 17621
Water Resources Research Committee, report	9735
Water rights, Federal-State relationships, clarify, hearings	21240
Water supply, see Water.	
Water Supply and Pollution Control Division, activities of Basic and Applied Sciences Branch, report, 1964	18891
Water systems:	
bond sales, 1963	16847
sewage and water works construction, contract awards	18922
Water vapor:	
bands, line parameters and computed spectra at 2.7u	14937
content in column of atmosphere, spectroscopic method of integral determination	14919
high altitude, satellite determination	14783
planets, settling time of fixed amount of oxygen in atmospheres	1480
radio-release technique for measurement in gases	13703



# INDEX 1964

Entry	Entry
Waterborne commerce, <i>see</i> Commerce.	Watson, Harold, power requirements for cotton gins in Yazoo-Mississippi Delta..... 7892
Waterborne foreign trade statistics... 4122	Watson, John E., method of tagging immature herring..... 2342
Waterbury, Conn., occupational wage survey..... 13065	Watson, Calif., railroad accident..... 18191
Watercraft, <i>see</i> Ships.	Watt, Bernice K., composition of foods, raw, processed, prepared..... 9930
Waterflooding, <i>see</i> Petroleum.	Watt, Lois B.: education, literature of profession, list..... 581
Waterfowl, <i>see</i> Ducks—Water birds.	Near East and north Africa, bibliography..... 14183
Waterfront facilities, security, Federal regulations..... 17155	textbook classification scheme for use with elementary and secondary schoolbooks, etc..... 15842
Waterfront: operational facilities, Navy design manual, changes..... 3201	United Nations, bibliography..... 6564
Waterhouse, Robert W., Camp Century Movement record..... 6588	Watthour meters, <i>see</i> Electric meters.
Waterloo, Iowa, occupational wage surveys..... 7407, 9458	Waukegan Port District, Ill.: conveyance of real property to— hearings..... 2123 law..... 1952 report..... 464
Waterman Wash, ground-water conditions in area..... 4814	Waupaca County, Wis., ground-water resources..... 10656
Watermelons for garden..... 11767	Wave forms: spin-wave instability threshold data..... 19158 automatic plotting..... 19158 staircase, low-power transistorized circuit provides..... 14818
Waters, Carrie J.: feasibility of abbreviated forms for enlistment screening test..... 15275 simulated branching tests..... 15274	Wave functions: prolate radial spheroidal, digital computer program in NAREC code for calculating..... 13326 spheroidal eigenvalues and expansion constants, digital computer program for calculating..... 13324
Watersheds: burned, first aid treatments, reducing flood and erosion damage..... 8665	Wave generators, shallow water, wave height prediction..... 12341
California area burned by wildfire, 1940-59..... 8666	Wave numbers, calculation of spectral density of radiation scattered by non-equilibrium plasma..... 13697
development, projects, miscellaneous, hearings..... 2121, 6335	Waveforms, <i>see</i> Wave forms.
grazed and ungrazed, Badger Wash Basin, Colo., 1953-58, hydrologic and biotic characteristics..... 4804	Waveguides: cryogenic, window sealed with plastic foam..... 14817 noise figure of X-band mixer with tunnel diode, measurement..... 19169
Honey Creek basin, Collin and Grayson Counties, Tex., hydrologic studies, 1953-59..... 15967	VSWR measurement— modified reflectometer technique..... 13354 Navy calibration program..... 5623
hydrologic data, agricultural experimental watersheds, 1956-59..... 4213	Wavenumbers, <i>see</i> Wave numbers.
problems and prospects of watershed development (address)..... 11748	Waverly, Tenn., ground-water geology of area..... 19799
project structures— hearing..... 12114 report..... 10238	Waves: ocean, bed material transport by waves and currents..... 12339 one-dimensional free-surface interaction on liquid metals with transverse magnetic field..... 13249 water, thermistor probe for measuring particle orbital speed..... 12340 wave-height prediction for wave generators in shallow water..... 12341 <i>see also</i> Earthquakes—Electric waves—Magnetic waves—Radio waves—Shock waves—Standing waves.
projects development, 1964, hearings..... 21210	Waxes: Federal item identification guides for supply cataloging..... 12294 supplements..... 3475 Federal supply catalog— identification list, change..... 15829 management data list, changes..... 4601, 14161, 15830
protection and flood prevention act, amend— hearing..... 12114 reports..... 6489, 10238	Wayne County, Mo., redevelopment area, opportunities for economic growth..... 13657
protection and flood prevention, economic guide..... 11611	Wayne State University: mass spectrometer, duty-free entry— law..... 17230 reports..... 8310, 14049, 17580
recreation in small projects, rural areas development program..... 5853	
recreational development projects, utility relocation costs, report..... 6489	
small, stream-gaging stations for research..... 13581	
<i>see also</i> names of rivers, etc.	
Watervliet Arsenal, technical report..... 7665	
Waterways, <i>see</i> Inland waterways— <i>also</i> waterways by name.	
Waterways Experiment Station: capabilities..... 628-640 summary..... 640 miscellaneous papers..... 2299, 17959 publications, list..... 10490 technical memorandums..... 641, 14211 technical reports..... 642-643, 2300-3, 4671, 6598-6601, 8520, 14212-214, 15878, 19662-665, 21282-284.	
Waterweed, submerged chemical control in western irrigation and drainage canals..... 1677	
Watkins, J. Wade, potential of nuclear explosives for producing hydrocarbons from deposits of oil, natural gas, oil shale, and tar sands in United States..... 13110	
Watkinsville, Ga., cropping system studies on Cecil soil, 1943-62..... 11741	
Watling Island, <i>see</i> San Salvador.	

# JANUARY-DECEMBER

Entry	Entry
	Ways and Means Committee, House:
	calendar-----3659
7892	committee prints-----2128,
	4512-13, 6372, 12162
2342	digest of testimony on H.R. 8000-----10348
18191	excise tax-----12163
	compendium-----14020
	structure panel discussion-----12164
9930	hearings-----417, 6371, 19522
	press releases, President's 1963 tax
	recommendations, compilation,
	committee print-----4513
581	reports-----320,
	347, 2075, 8287, 8304-18, 8327-
14183	28, 8335, 8344-45, 8348-51,
	10205-206, 10213, 10241, 10264,
15842	10266, 12047, 12082-83, 13946,
6564	13948, 13962, 13979, 15571.
	Weapons:
	Army firepower, troop topics-----10006
	cost and pricing data not obtained
	for determining reasonableness
2123	of prices for components pro-
1952	cured from Aluminum Co. of
464	America, by Bendix Corpora-
	tion and ACF Industries, Inc.,
10656	for AEC, GAO report-----21332
	Federal item identification guides
	for supply cataloging-----12297
19158	supplements-----3478
14818	fleet ballistic missile, human factors
	design standards for-----
	equipment-----5619
	systems-----5618
13326	French military and nuclear devel-
	opments, press reports-----14581
	men and weapons (North Vietnam
13324	periodical)-----2606
	naval, reliability engineering, speci-
12341	fications and assurance, film
	brochure-----18867
	naval systems, equipments, and
	components, reliability engi-
13697	neering handbook-----16801
	nuclear-----
	AEC program, hearings-----8235
14817	arms control measures and dis-
	armament program-----4276
19169	effects-----17065
	effects research capabilities of
13354	Waterways Experiment Station
5623	-----636
	French development-----12761
	French strategy, installations,
19799	expenditures-----19897
	general correlative studies, Oper-
	ation Bren-----4294
	information, exchange with
12339	NATO and member nations,
	agreement-----
13249	hearings-----17440
	reports-----19457, 19569
12340	not to be trifled with, USSR
	article-----974
12341	play of Aggressor forces during
	tactical exercises, evaluating,
	Army field manual-----10001
	shielding against gamma rays,
	neutrons and electrons, review
	and bibliography-----7577
	system, plotting circles of con-
12294	stant overpressure around
3475	targeted points, program-----21786
	test ban-----
15829	agreement, USSR study-----2920
4601,	proposals, military aspects,
14161, 15830	hearings-----6495
ment	treaty, agreement with other
eco-	Governments-----1606
13657	treaty, military implications,
	subcommittee report-----10410
	testing, health aspects-----13721

Entry	Entry
	Weapons--Continued
	systems-----
	concept of project management-- 20987
	fundamentals-----
	analysis of weapons-----7658
	synthesis-----5622
	international control, excerpts
	and bibliography for 1964-65
	high school debates-----12167
	rotating and static precision
	components symposium, pro-
	ceedings-----15009
	Wear, see Friction.
	Weather:
	aircrews, Air Force manual,
	change-----11792
	career opportunities, engineers and
	physicists, weather systems-- 15150
	maps-----
	daily weather map-----3402
	Northern Hemisphere, for IGY-- 5758,
	7842, 9880, 11688, 13527-528
	synoptic, Northern Hemisphere,
	daily series-----3398-99
	mariner's weather log-----3707
	modification techniques, Soviet re-
	view-----4923
	publications, price list-----1552
	radio aids-----
	Atlantic and Mediterranean
	area-----20677
	Atlantic and Mediterranean,
	Pacific and Indian Ocean areas,
	change-----13313
	Pacific and Indian Oceans. 3075, 21818
	review, monthly-----3752
	satellites, vortex structure of cloud
	cover according to data-----16780
	service A schedules-----1753
	changes-----5012, 9991, 17019
	service C schedules-----4271
	change-----20974
	service for merchant shipping-- 1658
	service O international schedules-- 11812
	change-----19191
	severe factor, analysis in automatic
	control of air route traffic-----11702
	systems, kinematic properties-- 11701
	weather and crop bulletin-----4153
	weather and flight safety, USSR
	study-----20053
	weather science study kit-----3190
	winds aloft observations, manual-- 7841
	see also Climate--Meteorology--
	Weather forecasts.
	Weather Bureau:
	barometric pressure measurements,
	history-----13530
	circulars-----7841, 9878, 13516
	climatological record forms for ob-
	servations, history-----13529
	meteorological services, acceptance
	and use of funds from States,
	etc., report-----15744
	nomination of Robert M. White,
	hearings-----4576
	press releases-----3931
	reimbursements between appropria-
	tions, authorize, report-----17788
	research progress and plans, 1963-- 5760
	student trainee report, summer
	1963-----16921
	technical papers-----19027, 21922
	Weather control:
	artificial modification of clouds and
	fog, USSR study-----20090
	Colorado River basin, increase pre-
	cipitation, hearing-----14146
	future, USSR study-----16523
	military significance, translation-- 20390

# INDEX 1964

	Entry		Entry
Weather forecasts:		Weather stations—Continued	
aircraft investigations of squall lines, development 1956-60	11693	NSSP—	
atmospheric pressure fields using hydrodynamic equations, USSR study	4960	small-scale surface network data, analysis methods	11707
average, resume and outlook, monthly	3273	surface network, index	11697
aviation, key to	11689	storage-gage, precipitation data for Western United States, July 1962-June 1963	15163
calculation of non-adiabatic processes in numerical short-range pressure forecasting, USSR study	20168	Weathering:	
coastal warning facilities charts, 1964—		concrete and concreting materials, performance, investigation—	
Cape Hatteras, N.C. to Brunswick, Ga.	13520	revisions	2301
Hawaiian Islands	11687	supplements	2300, 21284
Manasquan, N.J. to Cape Hatteras, N.C. and Chesapeake Bay	13522	Weatherman in space	11980
Morgan City, La. to Apalachicola, Fla.	9879	Weaver, George L-P:	
Point Conception, Calif. to Mexican border	13524	addresses, etc.—	
Puerto Rico and Virgin Islands	13525	Mar. 5, 1964	7352
cyclic solar activity and weather forecasting, USSR study	10787	May 1, 1964	11244
forecasting jet streams	9028	May 12, 1964	11250
high-altitude, recent developments, USSR studies	5055	June 1, 1964	13025
instability lines and their environments as shown by aircraft soundings and quasi-horizontal traverses	11694	Oct. 16, 1964	19828
medium range forecasting, new methods, Hungarian study	16187	Weaver, James M., television microscopy in cytopathology	3114
nonadiabatic factors in short-term forecasting of lower-atmosphere geopotential fields, USSR study	20321	Weaver, Lynn E., reactor kinetics and control	13714
numerical prediction for 1962, USSR publications review	11691	Weaver, Robert C., address, Dec. 3, 1963	830
problems of long-range weather forecasting, USSR studies	7013	Webb, Thomas D., testimony, hearings	6526
radiation measurements from satellites in non-adiabatic model of atmosphere movements, USSR study	6905	Webber, Carl E., effects of visual display mode on 6 hours of visual monitoring	17012
theoretical model, USSR translation	16076	Webbert, M. Virginia:	
USSR, hydrodynamic long-range vertical structure of 3 dry lines as revealed by aircraft traverses	11698	basic data on economy of Indonesia—	
weatherman in space	11980	foreign trade regulations of Indonesia	12552
Weather modification, see Weather control.		investment factors in Indonesia	18176
Weather observers, Air Force officers, contribution of education to rated effectiveness	20970	Webbing, general repair, Army technical manual	17052, 21004
Weather stations:		Weber, Frederick P., aerial survey of spruce and fir volume killed by spruce budworm in northern Minnesota	12472
agreements with—		Weber, Ray, early pruning reduces blister rust mortality in white pine plantations	8646
France	7778	Webster, Clark G., improved nest structures for wood ducks	14284
Colombia	18968	Webster, Henry H., timber management and economic analysis, case study	8678
Mexico	11629	Webster, Marvin W., peanut marketing	4206
Peru	20833	Webster, S. Dak., saline water conversion demonstration plant, annual report, Mar. 1962-June 1963	18162
automatic (grasshopper) design, etc.	13327	Wedges, calculations of field near apex of wedge surface	3051
decadal census—		Weed, George T., relief	19545
California	15156	Weeds, chemical control in crimson clover grown for seed production	7950
Idaho	15157	see also Waterweed.	
Michigan	15158	Weekly:	
Minnesota	15159	NOTE.—For all publications which begin with the word "Weekly", see subject, or name of department, etc., issuing publication.	
Nebraska	15160	Weeks, Edwin P., hydrologic conditions in Wheatland Flats area, Platte County, Wyo.	19804
Nevada	16919	Weeks, W. F., structural control of vertical variation of strength of sea and salt ice	14203
New England	15161	Weeks, see names of special weeks.	
Oklahoma	15162	Weertman, Johannes:	
Oregon	16920	profile and heat balance at bottom surface of ice sheet fringed by mountain ranges	19649
electronic fire weather station	8659	rate of growth or shrinkage of non-equilibrium ice sheets	19651
index	16782		
North Atlantic Ocean stations, oceanographic observations—			
Delta, 44° N., 41° W.	13815		
Echo, 35° N., 48° W.	13814		

# JANUARY-DECEMBER

Entry

11707  
11697

15163

2301  
21284  
11980

7352  
11244  
11250  
13025  
19828

3114

13714

830

6526

17012

8815

12552  
18176

21004

12472

8646

14284

8678

4206

18162

3051  
19545

7950

19804

14203

19649

19651

Entry

4189

14330

1472

7530  
6526

16677

3202

3193

1798

16522

13732

7035

9191

20585

18782

20637

20622

7204

20540

7551

19445

5545

1492

13430

9572

21670A

14855

21088

8783

20707

Entry

5424

10651

20703

10069

20658

20659

1744

4258

15364

10476

12510

9557

10652

7391

14441

20167

14512

14862

16435

12726

10898

21602

11179

20552

13164

5259

4911

21742

13170

2790

1150

1577

11141

20560

12897

21602

20542

20322

Weevils:  
boll weevil, mechanical devices to expedite rearing in laboratory, white pine, control, evaluating and scheduling in northeast

Wehrend, William R., Jr., effect of changes in base contour on damping in pitch of blunted cone

Weiberg, James A., wind tunnel tests of airplane model with unswept tilt wing of aspect ratio 5.5, with stall control devices

Weid, Arthur C., testimony, hearings-  
Weighing instruments, *see* Scales (weighing instruments).

Weight:  
analysis, moving belt radiator system for waste heat rejection in space

handling equipment and service craft, Navy design manual, changes

lifting provisions for women, by State

Weight control, *see* Obesity.

Weightlessness:  
bibliography

biological studies under conditions of space flight

biomedical research studies, bibliography

ground tests with liquids, USSR study

physiological effects on cosmonauts, USSR study

simulation with subject immersed in rotating water tank, observations

time response of liquid-vapor interface

*see also* Zero gravity.

Weights and measures:  
commercial, specifications, tolerances, and regulations

11th General conference, transactions of meetings

Institute of Length Measurement, East Germany, organization, etc

International system of units—  
physical constants and conversion factors

resolution no. 12 from proceedings of 11th General Conference

maximum desirable, of vehicles operated on Federal-aid systems

recommended unit prefixes, defined values and conversion factors

standards, U.S., history

Weights and Measures, National Conference on, *see* National Conference on Weights and Measures.

Weiner, Louis I., wear resistance of military textiles

Weinstein, Herbert, mixing of coaxial streams of dissimilar fluids, etc

Weintraub, Gerald D., employer expenditures for selected supplementary remuneration practices in finance, insurance, and real estate industries, 1961

Weirich, Robert L., take-off performance of representative supersonic transport configurations

Weirs, *see* Dams.

Welse, Robert W., Jr., selling in Pakistan

Welser River, basin, Idaho, ground water

Weiss, E. C., anti-air warfare training program

Weissbrodt, Sylvia R., State labor legislation enacted in 1963

Weist, William G., Jr., geology and ground-water resources of Yuma County, Colo.

Welsz, Alexander Z., response and feedback techniques for automated training of visual identification skills

Weitman, Murray S., comparison of U.S. and U.S.S.R. employment in industry

Weitzman, Stanley H.:  
catfishes of South American callichthyid genus *Corydoras*

South American characid fishes of subfamilies Lebiasininae, etc.

Welch, B. E.:  
effect of ventilating air flow on human water requirements

time-concentration effects in relation to oxygen toxicity

Welcome aboard

Welcome stranger, suggestions for schools and communities when receiving educators from abroad

Weld County, Colo., ground-water resources of South Platte River basin

Welded pressure transducer made as small as 1/4th-inch in diameter

Welder, Frank A., geology and ground-water resources of Uvalde County, Tex.

Welders, employment outlook

Welding:  
austenitic heat resisting steels and alloys used in building gas turbines, USSR study

ceramic flux in welding some alloys

electron beam, in industry, USSR study

electronic module fabrication

electroslag

and remelting, USSR

fluxes, USSR study

kinetics of austenite grain growth

of alloy steel, USSR study

USSR study

insulated tooling permits uniform, high-quality

method of welding joint in closed vessel improves quality of seam

nickel and its alloys, USSR

niobium and its alloys, USSR study

selected techniques

sleeve and cutter simplify disconnecting welded joint in tubing

spot, of sintered aluminum powder with D16AT and AMg6 alloys, USSR study

steel welding and welding equipment, USSR studies

technology, effect of columbium as micro-alloying element in steels

titanium and niobium, USSR study

upsetting butt edge increases weld-joint strength

USSR research

vacuum diffusion, of metals, USSR study

vacuum-type backup bar speeds repairs

weldability of heat-resistant material SAP by fusion, USSR study



# INDEX 1964

	Entry		Entry
Welding flux, <i>see</i> Flux.		Wesson, William T., taxes paid by firms marketing farm food products	6554
Welfare, <i>see</i> Public assistance—Social work and problems.		West, Kelly M., international biomedical research, 1st National Institutes of Health international symposium	18815
Welfare Administration:		West, S. W., ground water for irrigation in part of Fort Hall Indian Reservation, Idaho	2426
alcoholism, preventive programs	7846	West (U.S.):	
cooperative research and demonstration grant program in aging	7848	ancient lake deposits, Precambrian to Pleistocene, review and annotated bibliography	15940
deficient practices relating to Federal matching State expenses, public assistance programs in North Carolina, GAO report	8707	civil rights, public schools	10097
excessive financial participation in federally aided public assistance programs in Louisiana and Oklahoma, GAO report	6764	evaluation of western phosphate industry and its resources, introductory review	16636
Welfare funds:		fresh fruit and vegetable unloads in western cities by commodities, States, etc.	7880
facts and figures—		instrument approach procedure charts and airport obstruction charts, dates of latest editions	3408
1962, grants, etc.	829	irrigation and drainage canals, chemical control of water-weeds	1677
1963, grants, etc.	18153	irrigation, quality of surface waters, Western States	4819
welfare and pension plans disclosure act—		labor organizations, reporting, register	16574
bonding provisions of Federal labor laws—		plants poisonous to livestock, description, etc.	20915
hearings	4492	radiation measurements, environmental, 1962-63	21012
report	15498	reducing salt injury to ornamental shrubs	7921
fidelity bonding	21656	rural nonfarm areas, consumer expenditures and income, 1961—	14687
questions and answers	11248	small cities, consumer expenditures and income, 1961—	11271
welfare and pension plans specialist, examination announcements	216, 6083	snow survey and soil moisture measurements	15089
Welfare in review (periodical)	4154	storage-gage precipitation data, July 1962-June 1963	15163
statistical supplement	21925	Upper Cretaceous strata, correlation between western interior, Gulf coastal plain, and Europe	18138
Welfare work, <i>see</i> Public assistance—Social work and problems.		urban places, consumer expenditures and income, 1960-61—	14686, 21243
Well drilling, Cordova, Alaska, ground-water test-well drilling	827	water development—	
Welland Canal:		water supply—	
reimposition of tolls, agreement with Canada	9811	fall summary, 1964	21877
suspension of tolls, agreement with Canada	11640	outlook and snow surveys	4145
Weller, William W.:		western range and livestock report, monthly	4155
heat capacities and entropies of akermanite, etc.	5489	West African Customs Union, foreign trade regulations	14383
low-temperature heat capacities, etc.—		West Branch Susquehanna River, <i>see</i> Susquehanna River.	
lead molybdate and lead tungstate	7437	West Coast Memorial, San Francisco, general information	19195
sulfides of arsenic, germanium, and nickel	18694	West Covina, Calif., population, special census	17106
Wells, C. Sinclair, Jr., similar solutions of boundary layer equations for purely viscous non-Newtonian fluids	11396	West Des Moines, Iowa, sand and gravel operations and costs at Martin Marletta Corp.	5474
Wells, Daniel R., plasmoids generated by electrodeless plasma gun	5966	West Germany, <i>see</i> Germany.	
Wells, John D., relationship of Precambrian quartzite-schist sequence along Coal Creek to Idaho Springs Formation, Front Range, Colo.	18135	West Harbor, Ohio:	
Wells:		engineer report	8521
Fountain Valley, Colo., computation of drawdowns caused by pumping of wells	12516	departmental edition	8247
Grand Prairie region, Ark., artificial recharge problems	817	document edition	
methods of determining permeability, transmissibility and drawdown	2424	West Indies:	
ten-thousand meter exploratory well in Azerbaydzhan, USSR study	5344	Beane Field Airport, St. Lucia, use, agreement with Great Britain	20837
Wenley, Archibald G., memorial volume, ars orientalis	4751	beetles, notes on new and old species of Alticinae (coleoptera)	7598
Wenner bridge	1531	climatological data	3329
Werner, Elisabeth, relief	2026	French West Indies, agricultural production and trade	12315
Wernick, Joel S., central factor in pure tone auditory fatigue	4317	lights and fog signals, list	1523, 18310, 20674
Wertheimer, Michael D., employment of scientific and technical personnel in industry, 1962	16613	sailing directions	5774, 7629
Wesley, Wallace A., good posture for boys and girls	4621		

# JANUARY-DECEMBER

Entry		Entry		Entry
	West Milton, N.Y., geology and hydrology of area.....	12524	Westinghouse Electric International, E award ceremonies (remarks).....	229
6554	West North Central States, see Central States.		Westlands water district, see Central Valley project.	
	West Point, N.Y., see Military Academy, West Point.		Westley, Tomoe L., relief.....	10368, 17198
18815	West Quincy, Mo., accident.....	10714	Westminster, Calif., population, special census.....	180
	West South Central States, see Central States.		Weston, W. Va., redevelopment area, development opportunities.....	15250
2426	West Virginia:		Westrup, Jack, lecture, Sept. 3, 1963.....	11305
	annual survey of manufactures, 1962, statistics for States, standard metropolitan statistical areas, and large industrial counties.....	6029	Wetmore, Alexander, additions to records of birds known from Panama.....	3129
15940	climatological data.....	3329	Wetsel-Oviatt Lumber Co., Inc., relief.....	8279, 15660
10097	cost of marking hardwood sawtimber.....	8651	veto.....	19448
16636	electric rate book.....	15899	Wetzel County Hospital, relief.....	15621, 17180
	hardwoods, tree diameter poor indicator of age.....	8647	Wexler, Arnold, NBS standard hygrometer.....	11433
7880	labor organizations, reporting, register.....	16570	Weymouth-Fore River: engineer report—	
3408	minerals industry, minerals yearbook chapter.....	2991	departmental edition.....	8522
	municipal waste facilities, 1962 inventory.....	3103	document edition.....	8249
1677	municipal water facilities.....	18908	Whale sharks, embryo, information on morphology.....	7597
4819	natural resources.....	14365	Whaling, international convention, amendments to schedule.....	5703
16574	opportunities for wood industries development through application of FPL research.....	6744	Whaling Commission, see International Whaling Commission.	
20915	precipitation data, hourly.....	3578	Whang, Shin Sook (Renee), see Shin Sook (Renee) Whang.	
21012	roads and highways, right-of-way acquisition practices report.....	8329	Wharton, County, Tex., transfer from Galveston division to Houston division of southern district of Texas—	
7921	southern, removing methane from Pocahontas coalbed.....	1443	law.....	8221
14687	timber resources.....	21329	reports.....	4528, 6284
	Wirt County, Cow Run sand and Burning Springs pool, secondary oil recovery possibilities.....	14745	What consumer wants to know.....	11781
11271	women workers, 1960.....	15179	What do off-job accidents cost industry? (remarks).....	13041
15089	Wester, Robert E., suburban and farm vegetable gardens.....	4203	What is good day care?.....	21040
15163	Western Carriers' Conference Committee, emergency board report.....	10478	What is your tobacco crop really worth to you?.....	6627
	Western County, Wyo., geology of Upton quadrangle.....	19776	What's up there, source book in space oriented mathematics for grades 5-8.....	7570-71
18138	Western Europe, see Europe.		What training village should look like, USSR.....	14517
86, 18622	Western Greyhound Lines, wage chronology, 1945-63.....	14688	What you should know about exporting, how-to-get-started handbook.....	19826
21243	Western Hemisphere, see Hemisphere, Western.		Wheat, Francis M., nomination, hearing.....	17871
21877	Western hemlock, see Hemlock.		Wheat:	
4145	Western pine beetle, see Beetles.		bulgur recipes.....	16934
4155	Western States, see West (U.S.)		carlot receipts, physical, chemical, etc., properties 1953-57 crop year, summary.....	5
14383	Western Training Center, catalog of courses, 1964.....	4374	clears, encourage industrial utilization, hearings.....	21199
	Western Union Telegraph Co., wage chronology, 1943-63.....	21666	domestic, price equalization, research programs, etc.—	
19195	Western Utilization Research and Development Division:		law.....	10140
17106	laboratories and functions.....	5799	reports.....	6467, 8323
	publications and patents, semiannual list.....	7900, 16936	durum, acreage allotments in Tulare lake area, Calif., increase and make permanent, hearing.....	15580
5474	Western white pine, see Pine.		foreign trade prospects.....	8629
	Westinghouse Electric Corporation: excessive costs paid for propulsion reduction gears by Navy Dept., GAO report.....	4759	futures—	
8521	overpricing—		commitments of traders.....	3344
8247	B-58 electrical power systems purchased by General Dynamics Corp. under cost-plus-a-fixed-fee prime contract, Air Force Dept., GAO report.....	8728	trading and open contracts.....	3550
	contracts for T38A electrical power systems, Air Force Dept., GAO report.....	8730	gluten, vital, from Canada, determination of no injury or likelihood thereof to U.S. industry.....	11655
7598	nuclear reactor components, GAO report.....	6776	growers problems and prospects (address).....	7907
3329	nuclear submarine components, GAO report.....	6777	hard winter, loading boxcars in country elevators.....	19088
12315			improved standards, background on.....	4198
1523, 3310, 20674			legislation, hearings.....	4488, 8352
5774, 7629				

# INDEX 1964

	Entry		Entry
Wheat—Continued		White, H. D., Jr., design of PFM	
national referendum, May 21, im-		telemetry encoders-----	13211
portance (remarks)-----	23	White, Jack A.:	
pasture, monthly-----	4156	feasibility study of bang-bang path	
plant progeny, radiosensitivity in-		control for reentry vehicle-----	1468
fluenced by gamma irradiation		solutions for flight-path angle of re-	
of parent seed-----	9008	entry vehicle in upper atmos-	
programs, voluntary adjustment		phere-----	16696
and price support, hearings-----	6402	White, James L., statistical analysis	
sales to Soviet bloc, benefits to U.S.		of world's merchant fleets-----	2978
(statement)-----	1639	White, Max G., uranium at Morro do	
sedimentation values-----		Vento, Serra de Jacobina, Brazil	
changes during storage-----	6	White, Natalie D., ground-water con-	
stability-----	7	ditions in Rainbow Valley	
stem rust spread by barberry		area, etc-----	4814
bushes-----	9958	White, Robert M.:	
U.S. exports under Government		address, Apr. 23, 1964-----	13531
programs, 1962-63-----	14290	nomination, hearings-----	4576
voluntary marketing certificate pro-		White Cane Safety Day:	
gram, 1964 and 1965 crops, re-		designate Oct. 15 of each year:	
port-----	8290	law-----	21120
wheat situation-----	4157	reports-----	17518, 19560
winter-----		White-collar workers:	
crop production, 1963-----	7802	exemptions under fair labor stand-	
fertilization with urea, USSR		ards act-----	13515
study-----	16366	salaries in Hawaii, Puerto Rico, and	
Wheatgrasses, crested, and brome-		Alaska, May-June 1963-----	7415
grass hay production, interre-		White Earth Reservation, land, con-	
lationships of nitrogen, phos-		vey to Minnesota Annual Con-	
phorus and precipitation-----	5858	ference of Methodist Church-----	15427, 15658, 17206
Wheatland Flats area, Wyo., hydro-			
logic conditions-----	19804	White fir, see Fir.	
Wheatstone bridge, see Electric		White House, see Executive Mansion.	
bridges.		White House Committee on Small	
Wheelchairs, stairclimbing, developed		Business, press releases-----	3932
in Germany-----	5749	White House Conference on Export	
Wheeler, Kermit E., legal status of		Expansion, recommendations,	
women in United States, report		progress report-----	6121
for Minnesota-----	19031	White House Conference on Mental	
Wheeling, W. Va., area redevelop-		Retardation:	
ment manpower report-----	17935	1963 legislation, programs, activi-	
Whelan, Joseph G.:		ties, etc-----	4826
world communism, bibliography-----	15608	proceedings-----	7857
world Communist movement, selec-		White House-Department of Interior	
tive chronology-----	8403, 17472	Panel on Waterlogging and Sal-	
Whetstone River:		inity in West Pakistan, report	
flood control, engineer report-----		on land and water development	
departmental edition-----	10484	in Indus Plain-----	21837
document edition-----	10158	White House Police, see Police.	
Whipple, Elden C., Jr., electricity in		White House Regional Conference, re-	
atmosphere above exchange		port-----	13388
layer-----	5518	White pine, see Pine.	
Whiskers, bonding in oxide-fiber		White pine blister rust:	
(whisker) reinforced metals-----	7660	eastern, relating climate to infec-	
Whiskey:		tion hazard-----	6742
bourbon, designate as distinctive		growing white pines to avoid blister	
product of U.S., report-----	347	rust, new information, 1964-----	12460
imported, paper labels, marking re-		mortality in white pine plantations	
quirements, report-----	10264	reduced by early pruning-----	8646
Whiskeytown, Calif., proposed Whis-		White pine cone beetles, see Beetles.	
keytown-Shasta-Trinity		White River, morphology and hydro-	
national recreation area, report-----	1535	logy of glacial stream-----	4791
Whiskeytown Reservoir:		White Sands Missile Range, unneces-	
powerhouse, name Judge Francis		sary costs incurred by leasing	
Carr Powerhouse-----		rather than purchasing elec-	
law-----	17413	tronic data processing equip-	
reports-----	10220, 17780	ment, GAO report-----	794
Whistler-hydromagnetic extension of		White Sands National Monument, gen-	
magneto-ionic theory-----	5874	eral information-----	9659
Whistling atmospherics, see Static.		White trunk rot of hardwoods-----	18045
Whitcomb, Harold A., ground water		Whitefish:	
resources and geology of north-		Coregonus variability, USSR study.	
ern and western Crook County,		feeding habits in Arctic bodies of	
Wyo-----	19795	water, variation and multiple-	
White, Billie L., helicopter evaluation		ity-----	5006
in Arctic-----	49	Soviet studies-----	7107
White, Charles F., synthesis of unity-		Whitehead, Kenneth D., basic data on	
gain complex-zero RC net-		economy of Libya-----	21086
works-----	11495	Whitelaw, John B., teacher prepara-	
White, Elliot J., formation damage es-		tion, 5 targets for next 10	
timated from water sensitivity		years-----	8496
tests, Patrick Draw area, Wyo-----	18702	Whiteman, Majorie M., digest of in-	
White, Gladys O., simplified methods		ternational law-----	5697
for determining needs-----	6805		

# JANUARY-DECEMBER

Entry		Entry		Entry
13211	Whitestone Coulee unit, <i>see</i> Chief Joseph Dam project.	4706	Wight, Howard M., mourning dove status report, 1963.	6730
1468	Whiting (fish), products tested at University of Massachusetts annual school-lunch conference.	7542	Wiltala, S. W., water resources of Flint, Mich., area.	4801
16696	Whitlock, Charles H., preformed elliptical parachute.	21693	Wilcox, Ansley, House, <i>see</i> Ansley Wilcox House.	
2978	Whitman, Robert A.: iron and steel.	18671	Wild, Alfred, methods and practices in clay mining, processing, and utilization, Kraftite Co., Fremont, Calif.	1404
18113	iron and steel, mineral industry survey, annual.	20482	Wild animals, <i>see</i> Animals.	
4814	iron and steel scrap.	9660	Wild birds, <i>see</i> Birds.	
13531	Whitman Mission National Historic Site, general information.	21216	Wilder, Charles S.: acute conditions, incidence and associated disability, United States, July 1962-June 1963.	13423
4576	Whitney, Doris, compilation of statements and speeches of John F. Kennedy.	19069	bed disability among chronically limited, United States, July 1947-June 1961.	18925
21120	Whittaker, Colin W., liming soils, aid to better farming.	8052	current estimates from health interview survey— July 1962-June 1963.	9733
18, 19560	Whittemore, W. L., differential neutron thermalization.	1723	July 1963-June 1964.	21859
13515	Whitten, M. E.: determining oil content of cottonseed, evaluation of rapid method.	43	types of injuries, incidence and associated disability.	11583
7415	soybeans, rapid method for determining oil content.	9935	Wilder, Clarence J., convey lands to.	2012, 15641, 17194
15427, 17206	Whitten, Russell R.: dutch elm disease and its control.	1702	Wilderness areas: establish national system— hearings.	8386, 12138, 17435
3932	Whittenberger, R. T., electric sorting machines for tart cherries.	19053	law.	17435
6121	Whitton, Rex M., remarks, Mar. 19, 1964.	9739	reports.	13970, 15500, 17603
4826	WHO, <i>see</i> World Health Organization.	19269	Glacier Peak, general information.	2353
7857	Whole body counters.	5681	Goat Rocks Wild Area, general information.	2354
21837	Wholesale prices, <i>see</i> Prices.	4160	Mt. Jefferson Primitive Area, study and reclassification.	2393
13383	Wholesale trade: bibliography.	3753	Mt. Jefferson Wild Area, proposal.	2369
6742	primary market price index, monthly report.		North Cascades Primitive Area, study and reclassification.	2394
12460	sales and inventories, monthly report.		Wilderness, Battle of, commemorative postage stamp (poster).	9697
8646	<i>see also</i> names of commodities and industries.		Wildfire, <i>see</i> Fires.	
4791	Whooping cranes, <i>see</i> Cranes (birds).		Wildlife: abstracts, 1956-60.	10581
794	Why land on the moon?		acid mine pollution in U.S. affecting fish and wildlife, extent.	17998
9659	Why we serve.		autumn olive berries furnish food.	7926
18045	Wiard, Leon A., floods in New Mexico, magnitude and frequency.		code of Federal regulations.	6683
2837	Wichita, Kans.: consumer expenditures and income, 1961.		conservation, efforts to control nature (address).	841
5006	occupational wage survey.		conservation, list of publications.	5641
7107	water resources of area.		injury from use of insecticides, etc., prevent or minimize, report.	10216
21086	Wichita Mountains Wildlife Refuge, birds, list.		management in national parks.	12541
8496	Wickford quadrangle, R.I., bedrock geology.		pesticide-wildlife studies, review of Fish and Wildlife Service investigations, 1961-62, correction.	2337
5697	Wickman, Boyd E., mortality and growth reduction of white fir following defoliation by Douglas-fir tussock moth.		protection from pesticides, increase authorization for research, report.	12216
	Wide range phase detector.		public lands.	20451
	Wideman, F. L.: arsenic.		publications, price list.	13388
	copper.		regulations for District of Columbia.	14276
	Widows and widowers: Foreign Service officers retirement and disability system and adjustments— hearings.		special scientific reports, wildlife series.	4746, 6730-31, 8624-25, 10578-580, 15931, 18030.
	reports.		sportsman's stake in conservation.	5847
	13968, 15507, 17540.		TVA, valuable natural resources.	5720
	<i>see also</i> Pensions.		water-resource projects, uniform policies and cost allocation— hearings.	6361
	Wiebelt, J. A., spacecraft temperature control by thermostatic fins-analysis.		report.	6304
	Wiggins, Emilie, National Library of Medicine classification.		wildlife leaflets.	2344-46, 4747, 14284-285, 19741
			wildlife review— abstracting service.	4161
			bibliography and index, 1956-60.	10581



# INDEX 1964

	Entry		Entry
Wildlife refuges:		Williamson, R. L., Douglas-fir growth	
managers, address list, 1963-----	4747	and yield records-----	8682
national-----		Williamson County, Tenn., soil survey	
northeast, region 5-----	6721	report-----	20806
public use, 1963-----	14285	Willis, Dawn E., right-of-way acquisition, bibliography-----	9737
revenues, increase participation by counties-----		Williston, H. L., early yield of erosion-control plantations in northern Mississippi-----	2385
hearings-----	10414, 12148	Williston, N. Dak., District Court term, additional place, report-----	17735
law-----	17382	Willman, George C., jr., records and credit in profitable management-----	20782
reports-----	12244, 17532	Willoughby, Malcolm F., Rum War at sea-----	10122
system-----	14278	Wills, see Probate law and practice.	
refuge leaflets-----	697-700, 4737, 6721-27, 8605-8, 10568-569, 14278-200, 15922-924, 18001, 19731-733.	Willson International Ltd., Inc., President's E pennant for exports (remarks)-----	19361
see also names of refugees.		Wilmot, Charles A., increasing efficiency of power used for materials handling in southwestern cotton gins-----	12312
Wiley, Llewellyn, relation of job qualification ratings to performance ratings of basic training instructors-----	20971	Wilson, Alvin K., commercial pole production in northern Rocky Mountain area, 1962-----	8644
Wilhelm, Donald, jr., employee suggestion system for small companies-----	16858	Wilson, Milton T., hydrology and hydrogeology of Navajo Lake, Kane County, Utah-----	21355
Wilken, Arnold A.:		Wilson, Richard P.:	
basic data on economy of Nigeria-----	14373	occupational wage survey--	
market for U.S. products of Nigeria-----	6843	Boise, Idaho-----	20439
Wilkins, Anne, guides for field instruction for graduate schools of social work, etc-----	13533	San Bernardino-Riverside-Ontario, Calif-----	21673
Wilkes-Barre, Pa., principal electric facilities, map-----	673	Wilson, Robert W., jr., silvical characteristics of eastern white pine-----	8677
Wilkeson, Wash., coal study of area-----	5498	Wilson County, Kans., in situ combustion project and 3 water-flood projects, 1964-----	20480
Wilkins, Theresa B., educational directory, 1963-64: pt. 3, higher education-----	8480	Wilson's snipes, see Snipes.	
Willden, Ronald, geology of Christmas quadrangle, Gila and Pinal Counties, Ariz-----	19774	Wind, upper wind code, WBAN, coding instructions, manual-----	3189
Willenbrock, A. J., thin film vapor compression saline water conversion system-----	10673	see also Winds.	
Willlett Range, coal deposits-----	2995	Wind Cave National Park, general information-----	13305
Williams, D. A., address, Oct. 7, 1963-----	3137	Wind machines, tests as aid to burning slash-----	14324
Williams, D. N., development of aluminum castings with high impact strength at low temperatures-----	13151	Wind River project, non-Indian lands, canal unpaid reimbursable construction costs, report-----	17782
Williams, Dancy T.:		Wind tunnels:	
analysis methods for small-scale surface network data-----	11707	arc-heated hypersonic, flow evaluation-----	14877
instability lines and their environment as shown by aircraft soundings, etc-----	11694	high-temperature pebble-bed heat exchangers, evaluation of refractory oxide materials-----	20615
kinematic properties of certain small-scale systems-----	11701	Langley hot shot tunnel, contamination-induced luminosity ahead of blunt body, study-----	18775
thunderstorm wake of May 4, 1961-----	11708	Mach 6 open-jet system, diffuser performance and model-blockage effects at stagnation temperature to -3,600° F-----	16700
Williams, F. W., vegetable processing plant in Jackson County, Fla-----	5924	measurements, lifting rotor at high thrust coefficients and high tip-speed ratios-----	18785
Williams, Glenda, relief-----	6387, 17479, 19374	oil-smeared models aid measurements-----	11373
Williams, Harold W., speech, May 14, 1964-----	11829	Windbreaks:	
Williams, Henry B., relief-----	13840	Nebraska, height-age curves for Austrian pine-----	783
Williams, James L., lunar landing trajectories with reference to lunar-orbit-rendezvous mode, etc-----	3015	tree windbreaks for central Great Plains-----	5815
Williams, John J., testimony, hearings-----	12281	Windmill Point (ferry boat):	
Williams, Llewellyn, growing ginseng-----	19071	admit to American registry-----	1910, 2001, 4522
Williams, Lloyd R.:		Window dressing in bank reports:	
bauxite-----	20467	hearing-----	402
magnesium-----	14740	report-----	357
magnesium compounds-----	20484	Windows, nonlinear response to random noise-----	3015
Williams, Roger B., bedrock geology of Wickford quadrangle, R.I-----	10630		
Williams, Ross W., report on timber management plan, Gifford Pinchot National Forest-----	2373		
Williams, Thomas F., clean air act, description-----	4825		
Williamson, Malcolm J., burning does not control young hardwoods on shortleaf pine sites in Cumberland Plateau-----	14308		

Entry	Entry	Entry
8682	Winds:	Wings (aircraft)—Continued
20806	air loads on man, studies.....	airplane model with tilt wing and
9737	blowdown problems and solutions	differential propeller thrust,
2385	for forest owners.....	wind-tunnel tests of descent
17735	compensation method in Tralblazer	performance.....
20782	rocket vehicle flight tests, re-	cambered—
10122	sults.....	span having minimum induced
19361	fallout and winds.....	drag, aerodynamic design.....
12312	forecasting jet streams.....	variable swept, transonic inves-
8644	ground, loads on axisymmetric	tigation of pyramidal reentry
21355	launch vehicles.....	configuration.....
20439	gust loads in 1961 Rough Rider	delta—
21673	storms.....	curved and straight leading-edge,
8677	ionospheric patterns, observations	longitudinal aerodynamic char-
20480	through night.....	acteristics at Mach numbers 3
3189	measurement by rocket-grenade ex-	and 6, comparison.....
13305	periment.....	delta-wing-half-cone combination,
14324	motion and predictability of con-	heat transfer at Mach 7 and
17782	vective systems as related to	10.....
14877	upper winds.....	heat transfer and pressure mea-
20615	Ocean Breeze and Dry Gulch dif-	surements at Mach numbers and
18775	fusion programs, data, etc.....	angles of attack.....
16700	prevailing direction, mean speed	18740
18785	(m.p.h.), etc., National atlas	planform surfaces flutter char-
11373	sheet.....	acteristics, effects of leading-edge
783	sand movement.....	sweep at Mach number of 15.4.....
5815	sand transport by wind on natural	14888
1910	beaches, calculation procedure.....	pressure and heat-transfer distri-
2001, 4523	shear measurements, evaluation of	bution in hypersonic flow.....
402	chemicals for smoke trails.....	11418
357	stresses in pole building frames.....	recovery device for nonlifting
3018	structure, model for periodic char-	spacecraft, low-subsonic aero-
	acter of winds from 85 to 135	dynamical characteristics.....
	km.....	14881
	timber losses from fire, windstorm,	70° swept slab, heat transfer dis-
	etc.....	tribution at Mach number of
	warm sea breeze, effect on forest	9.86 and angles of attack up
	fire behavior.....	to 90°.....
	weighting and impact prediction for	21772
	unguided rockets.....	windward pressures, control-sur-
	wind-movement recorder, how to	face interaction effects.....
	make from spare drum-type re-	14867
	coder.....	effect of skewed wing-tip controls
	winds aloft observations, manual.....	on highly swept arrow wing at
	see also Solar wind.....	Mach number 2.03.....
	Windthrown timber survey in Pacific	20582
	Northwest, 1962.....	flutter characteristics obtained by
	Wine:	modified strip analysis, sub-
	imported, refund of taxes on expor-	sonic kernel function, and ex-
	tation—	periment, comparison.....
	law.....	13231
	reports.....	longitudinal stability characteris-
	8317, 15702	tics of low-aspect-ratio wings
	volatile fruit-flavor concentrates,	having variations in leading-
	use in cellar treatment—	and trailing-edge contours.....
	law.....	20577
	reports.....	monocoque and multiweb, camber
	10205, 15711	flutter characteristics.....
	Wines, John C., Project Pre-Schooner,	1482
	stem design.....	parawings—
	21013	auxiliary lifting devices for
	Winfield, Fred T., and wife, relief.....	supersonic airplane configura-
	2003, 6159, 6403	tion, low-speed longitudinal
	Wing-fuselage combinations, see Air-	aerodynamic investigation.....
	planes.....	14879
	Wing-tail-fuselage combinations, see	landing aid of supersonic-air-
	Airplanes.....	plane configuration, low-sub-
	Wingate, John W., management audit	sonic flight characteristics of
	for small retailers.....	model.....
	20791	1462
	Winget, J. Oscar, separation of lan-	model, radio-controlled, stalling
	thanide series and yttrium using	and tumbling.....
	phosphonic and iminodiac-	14852
	etic acid resins.....	recovery device for radio con-
	18693	trolled 1/2 scale dynamic model
	Wingrove, Rodney C.: guidance to	spacecraft, free flight inves-
	reference trajectories for lifting	tigation of deployment process.....
	reentry at supercircular velocity.....	1466
	13247	stall of VZ-2 VTOL airplane, wind-
	study of pilot's ability to control	tunnel test.....
	Apollo sphere vehicle during at-	3014
	mosphere entry.....	stalling in transition effect on 1/4-
	18788	scale model of VZ-2 aircraft.....
	Wings (aircraft): aerodynamic data on	16698
	large semispan tilting wing with 0.6 diameter	store pitch flexibility effect on
	chord, single-slatted flap, and	flutter characteristics of wing-
	single propeller rotating down	store configuration.....
	at tip.....	20605
	18747	supersonic, design of camber sur-
		faces with arbitrary planforms,
		numerical method.....
		14874
		swept, stall characteristics, review.....
		14896
		tilting—
		semispan, with —.6-diameter
		chord, Fowler flap, and single
		propeller rotating up at tip,
		aerodynamic data.....
		7540
		with 0.6-diameter chord, single
		slotted flap, and single propel-
		ler rotating up at tip, aerody-
		namic data.....
		20571

# INDEX 1964

	Entry		Entry
Wings (aircraft)—Continued		Wirtz, W. Willard—Continued	
unswept—		addresses, etc.—continued	
of finite span, predicting flutter		Feb. 6, 1964-----	7357
and divergence-----	3024	Feb. 11, 1964-----	14665
tilt wing of aspect ratio 5.5, with		Feb. 24, 1964-----	7362
stall control devices, wind-tun-		May 13, 1964-----	11245
nel tests-----	7530	June 2, 1964-----	13029
wing-body combination, lift, drag,		June 11, 1964-----	13030
and pitching moment, effects of		July 9, 1964-----	14661
spanwise variation of leading-		Sept. 7, 1964-----	18608
edge sweep-----	9596	Sept. 23, 1964-----	20425
winged shapes in air and helium,		Wisconsin, Wis., railroad accident----	6869
hypersonic aerodynamic char-		Wisconsin:	
acteristics-----	14866	annual survey of manufactures,	
Winn, Jack C., Jr., relief-----	15619	1962, standard metropolitan	
Winnemucca, Nev., hydrogeologic in-		statistical areas, and large in-	
vestigations in valley of Hum-		dustrial counties, statistics----	6027
boldt River-----	15963	climatological data-----	3329
Winnett, Mont., geology of Winnett-		electric rate book-----	14251
Mosby area-----	8756	geology of Dodgeville and Mineral	
Winning cold war, U.S. ideological		Point quadrangles-----	797
offensive:		Great Lakes area, fishery products,	
hearings-----	2112, 4497, 8382	wholesale dealers, list-----	725
report-----	10228	hydrology of upper Black Earth	
Winovich, Warren, equilibrium sonic-		Creek basin-----	821
flow method for evaluating		Ice Age National Scientific Reserve	
electric-arc air-heater perform-		designation, etc.—	
ance-----	9574	law-----	21147
Winright, Ky., railroad accident----	4880	reports-----	375, 19455, 19583
Winslow, Ariz.:		labor organizations, reporting, reg-	
relief—		ister-----	16572
law-----	1950	landings, fishery products-----	4162, 12419
report-----	4532	Mississippi River and tributaries,	
Winston, Ellen:		fishery products, wholesale	
addresses, etc.—		dealers, list-----	8612
Nov. 15, 1963-----	1659	municipal waste facilities, 1962 in-	
Feb. 28, 1964-----	6832	ventory-----	3105
Mar. 12, 1964-----	11712	municipal water facilities-----	18910
Mar. 19, 1964-----	8787	northern red oak, seedling and plant-	
Apr. 9, 1964-----	9889	ing tests-----	12475
May 13, 1964-----	11718	precipitation data, hourly-----	3578
May 27, 1964-----	13534	public school finance program,	
May 28, 1964-----	13535	1962-63-----	8493
June 10, 1964-----	13537	southwestern—	
Aug. 26, 1964-----	19028	early survival of planted trees by	
Sept. 14, 1964-----	19029	species, age classes, and site	
Winter wheat, <i>see</i> Wheat.		factors-----	774
Winters, Clyde W.:		ground preparation costs and 1st-	
ablation of blunted cylinder-flare		year survival of planted red	
configuration-----	14884	pine-----	775
heat transfer rates and ablation on		takes lead in pulpwood production----	18068
blunted cylinder-flare configura-		women—	
tion in free flight-----	18738	legal status-----	11721
Wire:		workers, 1960-----	9900
hot-wire transducer, cooling method		Wise County, Va., coal, carbonizing	
prolongs life-----	14804	properties-----	5496
stainless and copper-clad steel, as		Wisecarver, David W.:	
reinforcement for concrete mat-		device for placing borehole defor-	
tresses-----	14214	mation gage in horizontal hole----	21714
Wire communication, <i>see</i> Teletype.		in situ rock stresses, Ruth mining	
Wire mills, scrap and metal consump-		district, Nev., etc-----	20512
tion and stocks, mineral indus-		Wit, Daniel, labor law and practice	
try survey, monthly-----	3284	in Thailand-----	16588
Wire tapping, State Department se-		Witcofski, Robert D., blunt low-fine-	
curity, hearings-----	2244	ness-ratio bodies of revolution	
Wiring, <i>see</i> Electric wire and wiring.		at Mach number of 24.5 in he-	
Wirt County, W. Va., Cow Run sand		lium-----	11409
and Burning Springs pool, sec-		Witherell, Julian W., official publica-	
ondary oil recovery possibili-		tions of French Equatorial Af-	
ties-----	14745	rica, French Camerouns, and	
Wirth, Michael, lichen family Graphi-		Togo, 1946-58, guide-----	11306
daceae in Mexico-----	5563	Witkind, Irving J., geology of Abajo	
Wirtz, W. Willard:		Mountains area, San Juan	
addresses, etc.—		County, Utah-----	18132
Apr. 3, 1963-----	14662	Witnesses:	
Apr. 11, 1963-----	2940	congressional committees, omitting	
Oct. 23, 1963-----	14666	names from reports—	
Nov. 6, 1963-----	1360	law-----	21148
Nov. 7, 1963-----	1361	report-----	19576
Nov. 11, 1963-----	2938	Witucki, Robert M., boron filaments----	18721
Nov. 13, 1963-----	1357	Witzigman, Frederick S., determina-	
Nov. 14, 1963-----	1359	tion of fluvial sediment dis-	
Nov. 18, 1963-----	1358	charge-----	14363
Dec. 19, 1963-----	2939	WMS, <i>see</i> World magnetic survey.	
Dec. 29, 1963-----	7353		

Entry

7357	Woerner, Charles V., comparison of ground tests and orbital launch results for Explorer IX and Explorer XIX satellites.....	18787
4665	Wohl, Joseph G., human factors design standards for Fleet ballistic missile weapon system.....	5618
7362	Wohl, Millard L., Monte Carlo calculation of nuclear collision density of primary galactic protons in slab of aluminum.....	9571
1245	Wolf, Ken: bacterial kidney disease of salmonid fishes.....	10567
3029	lymphocystis disease of fish.....	6717
3030	Wolfbein, Seymour L.: address, June 23, 1964.....	14677
4661	paper, Dec. 8-10, 1964.....	20428
8608	Wolfe, Jack A., Miocene floras from Fingerrock Wash, southwestern Nevada.....	18134
9425	Wolfe County, Ky., opportunities for economic growth.....	19197
8669	Wolff, Ilse S., nursing role in counseling parents of mentally retarded children.....	10081
6027	Wolford, Everett R., frozen jelled fruits.....	7896
3329	Wolfson, David E., comparison of properties of coke produced by BM-AGA and industrial methods.....	7435
4251	Wolverton, Robert L., relief.....	15654
797	Women: ability counts, program guide for women's groups for the handicapped.....	21665
725	by number of children born, fertility by social, economic and housing characteristics, census of population, 1960.....	11914
821	career opportunities, civil service careers.....	21061
1147	clerical occupations, today and tomorrow.....	20884
9083	Committee on Civil and Political Rights, report.....	13381
6572	Committee on Education, report.....	7679
2419	educated, needs and opportunities in our society.....	21927
8612	employing policies of national governments.....	5767
3105	employment— in United States and 9 European countries, notes.....	7863
18910	private, opportunities.....	1542
12475	equal pay— act of 1963, legislative history.....	10308
3578	action for.....	13538
8493	facts.....	13548
774	in member nations of ILO.....	5768
775	what principle means, questions and answers.....	16925
18068	what you want in State bill.....	20888
11721	equal rights, amendment, report.....	17858
9900	equality in pay, employment opportunities, and language (remarks).....	13030
5496	family and property law— Iowa, summary.....	5764
21714	Ohio, summary.....	7860
20512	Federal Employment Policies and Practices Committee, report.....	3090
16588	Federal service, equal opportunity and equal pay.....	13542
11409	governors' commissions on status.....	7864
11306	high-level elective and appointive positions in national governments.....	5765
18132	Home and Community Committee, report.....	5638
21148	job holders, significance of research (address).....	15177
19576	job horizons for college women in 1960's.....	15175
18721		
14363		

Entry

Women—Continued labor legislation, protective, in 91 countries.....	7861
legal status in U.S.—	
Alabama.....	13539
Arkansas.....	19030
California.....	1662
Delaware, addendum.....	9890
Kentucky.....	3192
Maine.....	15173
Michigan.....	5763
Minnesota.....	19031
Missouri.....	7858
Nebraska.....	20883
North Carolina.....	15174
Texas.....	13540
Utah.....	16924
Vermont.....	11720
Washington.....	9891
Wisconsin.....	11721
manpower development and training act of 1962, occupational training under.....	18609
minimum wage coverage of domestic workers, present status.....	19036
Negro—	
problems.....	1542
workers in 1960.....	11722
nonwhite workers, current data.....	9892
political rights in member nations of United Nations.....	5766
portrayal by mass media.....	1542
Private Employment Committee report.....	5639
private household workers, fact sheets.....	13552, 19038
role in bringing peace through understanding (address).....	13537
role in war on poverty (address).....	12533
Social Insurance and Taxes Committee report.....	1545
State labor laws—	
general information.....	13550
summaries—	
Alabama.....	13543
Alaska.....	20886
Arkansas.....	13544
Delaware.....	11723
Illinois.....	19033
Indiana.....	11724
Iowa.....	9893
Maine.....	19034
Massachusetts.....	19035
1963.....	7865
North Carolina.....	13545
North Dakota.....	15176
Ohio.....	11725
Tennessee.....	13546
Utah.....	13547
volunteer work, new patterns.....	1542
weight lifting provisions, by State.....	3193
why continuing education programs?.....	5770
women in poverty.....	16927, 21929
workers, 1960—	
Alabama.....	3194
Arizona.....	16928
Arkansas.....	9896
Colorado.....	1664
Delaware.....	7866
District of Columbia.....	19039
Illinois.....	1665
Iowa.....	9897
Kentucky.....	19040
Maine.....	15178
Maryland.....	11726
Michigan.....	13553
Montana.....	7867
New Hampshire.....	1666
North Carolina.....	1667
North Dakota.....	13554
Oklahoma.....	13555
Puerto Rico.....	9898
South Carolina.....	9899



# INDEX 1964

	Entry		Entry
Women—Continued		Wood—Continued	
workers, 1960—continued		plywood joints nail-glued to solid	
State legislation of special in-		wood, performance.....	18056
terest.....	7859	primary wood industries of Ken-	
Texas.....	5771	tucky, utilization summary and	
United States, background facts.....	11719	directory.....	14307
Utah.....	1668	processing in Alaska, 1961.....	8695
Vermont.....	11727	robusta eucalyptus, its properties	
Virginia.....	3195	and uses.....	18082
West Virginia.....	15179	short and intermediate columns, ex-	
Wisconsin.....	9900	perimental analytical methods for	
Wyoming.....	19041	evaluating strength.....	12448
working, maternity protection and		species, pulp yield for various pro-	
benefits in 92 countries.....	7862	cesses.....	12450
Women, President's Commission on		stocks for M14, 7.62mm rifle, one	
Status of, <i>see</i> President's Com-		year tropical exposure test.....	11527
mission on Status of Women.....		use in bulk storage structures.....	14313
Women, Status of President's Com-		utilization research activities of	
mission on, <i>see</i> President's		Forest Service.....	7939
Commission on Status of		wood-using industries, location deci-	
Women.....		sion in northern Appalachians.....	8680
Women's Bureau:		<i>see also</i> Lumber—Softwoods—Ve-	
bulletins.....	1662-63, 3192,	neers— <i>also</i> names of articles	
5763, 7858, 9890-91, 11720-722,		manufactured from wood.....	
13539-540, 15173-175, 16924,		Wood ducks, improved nest struc-	
19030-31, 20883-884.....		tures.....	14284
director, nomination of Mary D.		Wood preservatives:	
Keyserling, hearing.....	8453	comparison, Mississippi post study,	
leaflets.....	5769, 7864, 13548, 20887	1964 progress report.....	12441
publications, lists.....	5769, 20887	comparison, stake tests, 1964 pro-	
Women's clothing, <i>see</i> Clothing— <i>also</i>		gress report.....	14309
names or types of clothing.....		<i>see also</i> Preservatives.....	
Won, Chung K., relief.....	15439, 17686	Wood pulp:	
Wong, Morton M., electrorefining		current industrial reports.....	3390, 21034
beryllium, operation of proto-		drying, effect of restraint on tensile	
type cell.....	16639	properties of handsheets.....	18079
Woo You Lyn, relief.....	239	hardwood—	
Woo Zee-Ching, relief.....	2176	neutral sulfite semichemical	
Wood, E. R., parametric investigation		pulps, 2-stage nonchlorination	
of aerodynamic and aeroelastic		bleaching.....	18057
characteristics of articulated		strength and fiber fractions.....	12444
and rigid (hingeless) helicop-		Lake States pulpwood cut continues	
ters rotor systems.....	21907	to climb, Wisconsin takes lead	
Wood, Floyd W., electron-beam		in pulpwood production.....	18068
melting.....	7430	pulpwood—	
Wood, Helen, occupational training		price trends in Midsouth, 1937-	
of women under manpower de-		63.....	18078
velopment and training act.....	18609	production in Lake States coun-	
Wood, John F., relief.....	6428, 13862	ties, 1962.....	6750
Wood, L. E., protection of reinforcing		Wood waste, <i>see</i> Waste products.....	
steel.....	14207	Woodard, T. H., inventory of pub-	
Wood, Lyman W., wood for use in		lished and unpublished chemi-	
bulk storage structures.....	14313	cal analyses of surface waters	
Wood, P. R., geology and ground-		in continental U.S. and Puerto	
water features of Edison-		Rico, 1961.....	6827
Maricopa area, Kern County,		Woodburn, John H., whole body coun-	
Calif.....	15957	ters as sensitive radiation de-	
Wood, W. W.:		tection instruments.....	19269
sheet metal forming technology.....	5868	Woodcocks:	
sheet metal forming technology		hunting, possession, transportation,	
handbook.....	7958	importation, Federal regula-	
Wood:		tions, 1964-65.....	15925
block shear methods for determin-		status report, 1963.....	4746
ing strength, comparison.....	12449	Woodlands, <i>see</i> Forests and forestry.....	
chemistry, list of publications.....	18046	Woodlawn Baptist Church, convey-	
decorative or simulated products,		ance of real property at Fort	
misbranding, etc., protect con-		Belvoir, Va., to.....	15458, 17205
sumers, hearings.....	6364, 6500	Woodpeckers, ring shake of trees as-	
drying, publications, list.....	8631	sociated with sapsucker in-	
growth, structure, and identifica-		jury.....	786
tion, list of publications.....	6741	Woodring, W. P., geology of Canal	
Industries development in West		Zone, etc., Tertiary mollusks.....	6803
Virginia through application		Woodrow Wilson House:	
of FPL research.....	6744	exempt from D.C. tax—	
laminates in flexure for marine use,		law.....	17329
design criteria.....	9762	reports.....	17507, 17709
nondestructive testing symposium,		Woods, <i>see</i> Wood.....	
proceedings.....	12453	Woodward County, Okla., soil survey	
oak, identification.....	14312	report.....	5698
plastic combination preparation us-		Woodworking, Government publica-	
ing gamma radiation to induce		tions, list.....	11542
polymerization.....	8066		
plasticized, uses, USSR industrial			
development.....	16252		

Entry

8056

4307

8695

8082

2448

2450

1527

4313

7939

8680

14284

12441

14309

21034

18079

18057

12444

18068

18078

6750

6827

19269

15926

4746

3, 17205

786

6803

17329

7, 17709

5693

11542

Entry

Woodworking machinery : and equipment, Federal item identification guides for supply cataloging -----	12290
supplements -----	3471
general information -----	18060
Woody plants, <i>see</i> Plants.	
Wool : and wool tops, futures trading and open contracts -----	3546
broad woven goods, current industrial reports -----	3391, 8121, 17103
consumption on woolen and worsted systems, current industrial reports -----	3390, 13752
foreign agriculture circulars -----	3520
futures, commitments of traders -----	3343
market news, weekly summary and statistics -----	3688
measuring by staple length recorder -----	13590
payment program -----	11779
products labeling act, amend -----	4501
hearing reports -----	12052, 15713, 17612
shorn, production, 1964 -----	18990
thermally conductive metal wood-silicone rubber material, used as shock and vibration damper -----	11370
used in manufacture of polishing felts, provide duty-free entry -----	13881
law reports -----	8307, 12231
wool situation -----	4163
<i>see also</i> Felt.	
Woolens, machinery activity, 1963, current industrial reports -----	10061
Woolfolk, E. J., then and now, changes in California annual-type range vegetation -----	8663
Woollett, Richard R. : electromagnetic wave propagation in cold, collisionless atomic hydrogen plasma -----	11379
frequency ranges for existence of waves in cold, collisionless hydrogen plasma -----	11403
Woolner, Sidney H., paper, July 1962 -----	230
Woonsocket, R. I., dental care services for school children -----	13421
Wooster, Eugene R., relief -----	10202, 15632, 17186
Worcester, Mass., occupational wage survey -----	18637
Worden, M. Orta, relief -----	1892, 2149
Work : airman specialties, development of standard list of work requirement factors -----	4256
capacity, related to chronological and physiological aging -----	5995
equal pay for equal work under fair labor standards act -----	13513
job performance ----- enlisted men scoring low on AFQT -----	15276
Federal mail sorters by age -----	9477
load stress, perception and short term memory -----	20706
maintaining work flow, supervisory training and development program -----	5686
measurement system of postal service, hearings -----	409
measuring capacity to work, seminar report -----	7734
mental, effect on development of people engaged in, USSR study -----	10780
occupational psychology, reflexometric and tremometric methods, USSR study -----	1228
performance standards for post engineering, Army pamphlet -----	10009

Entry

Work—Continued physical, effects of tranquilizing, analeptic and vasodilating drugs on capacity -----	13736
physiological basis for new forms of labor under conditions of technical progress, USSR study -----	12938
planning and organizing, supervisory training and development program -----	5689
sampling, repairs and utilities -----	1763
tolerance, adaptation to high altitudes related to age -----	13735
Work injuries, <i>see</i> Injuries.	
Work stoppages, <i>see</i> Strikes and lock-outs.	
Worker and supervisor agreement concerning worker's job description -----	15232
Workers, <i>see</i> Farm labor—Labor—Volunteer workers—Women.	
Working for U.S.A. -----	11950
Working mothers, <i>see</i> Mothers.	
Working women, <i>see</i> Women.	
Workmen's compensation, <i>see</i> Employers' liability and workmen's compensation.	
Worktime required to buy food and other articles -----	21679
Workweek, <i>see</i> Hours of labor.	
World, <i>see</i> Earth.	
World affairs, <i>see</i> International relations.	
World agricultural production and trade, statistical report -----	4166
World agricultural situation, 1964 -----	4614
World bank, <i>see</i> International Bank for Reconstruction and Development.	
World Communism, selected annotated bibliography -----	15608
print as Senate document, reports -----	8429, 15686
World Communist movement, selective chronology -----	8403, 17472
print as House documents, reports -----	17565, 17821
World Conference on National Parks, June 30-July 7, 1962, proceedings -----	20665
World Fishing Gear Congress, report -----	17999
World food budget 1970 -----	19623
World Forum on Syphilis and Other Treponematoses, proceedings -----	11567
World Games, Inc., relief -----	426, 17236
World Health Organization, regulations, notification -----	3154
World list of future international meetings -----	4167-68
World magnetic survey -----	7518
World motor vehicle production and registration, 1962-63 -----	151
World trade, <i>see</i> Commerce.	
World War, 1939-45 : blood program in World War II -----	21010
Marine Corps operations, isolation of Rabaul -----	9488
preventive medicine -----	17056
Sevastopol' diary of A. I. Kovtun, USSR -----	1279
surgery in World War II, activities of surgical consultants -----	10022
United States Army in World War II -----	9493, 11312, 20462
United States submarine losses -----	16784
paster -----	21821
USAF airborne operations -----	4264
<i>see also</i> Pensions.	
World's stake in U.S. agriculture -----	2317
Worley, Charles E., catalog of visual binary orbits -----	9609
Worley, Will J., geometrical and inertial properties of class of thin shells of revolution -----	20522

# INDEX 1964

	Entry		Entry
Worms:		Wyman Gordon Corp., unwarranted	
anaphylaxis, active and passive	9010	inclusion of tooling costs in	
helminthology, USSR studies	1032	price of case extrusion cylinders	
parasitic and free-living, regulation		procured by Bendix Corp.,	
of motor activity, role of medi-		under AEC cost-type contract,	10625
ators, USSR study	19890	GAO report	
publications, price list	20736	Wyoming:	
see also Helminths—also names of		annual survey of manufactures,	
worms		1962, standard metropolitan	
Wornom, Dewey E., longitudinal aer-		areas and large industrial	
odynamic characteristics of		counties	6032
curved and straight leading-		area measurement report	17077
edge delta wings	20609	climatological data	3329
Worsted:		electric rate book	2324, 19701
machinery activity, 1963, current in-		electric smelting of titaniferous	
dustrial reports	10061	iron ores	18681
systems, consumption, current in-		floods, magnitude and frequency	6800
dustrial reports	3390	forests	12482
Worthington, Norman P., 13 years of		Greater Claretton area, Newcastle	
thinning in Douglas-fir wood-		sandstone, areal variation in	
land	8657	reservoir oil characteristics	9507
Worts, G. F., Jr., hydrogeologic recon-		labor organizations, reporting,	
naissance of Poro Point and		register	16573
vicinity	15955	lodgepole pine, volume tables and	
Wotruba, Thomas K., automatic mer-		point-sampling factors	12481
chandising	5682	mineral industry, minerals year-	
Woven goods, see Textiles.		book chapter	1427
Wright, Bruce H., for-hire trucking		municipal waste facilities, 1962 in-	
of exempt farm products	7932	ventory	3108
Wright, Grace S.:		municipal water facilities	18913
enrollment size and educational ef-		national forests, recreation	12440
fectiveness of high school	8483	Pole Mountain District of Medicine	
offerings and enrollments in high		Bow National Forest, retro-	
school subjects	14198	cede jurisdiction to—	
Wright, Harry K., civil rights U.S.A.,		law	17353
public schools, Southern States,		report	15536
1963, Texas	10098	precipitation data, hourly	3578
Wright, I. J., nuclear techniques ap-		snow survey and soil moisture	
plication to high-reliability		measurements	18950
printed circuit boards manu-		snow survey measurements, 1919-	
facture	13718	63	15090
Wright, J. W., mean electron density		water supply outlook and snow	
variations of quiet ionosphere	3047	surveys	4146
Wright Air Development Division,		special report	13460
technical reports—1750, 5918,	13652	western physical stratigraphy and	
Wright Brothers Day, proclaim 17th		mineral resources of Permian	
of December each year, law	1938	rocks	2420
Wright Motor Lines, Inc., accident	14405	women workers, 1960	19041
Wrightsville Beach, N.C., sea water			
conversion research and devel-			
opment test station	18164		
Wrigley, Ada, programmes d'assurance			
et garantie de credit applicables			
aux exportations des			
Etats Unis	13824		
Wrigley, Robert L., Jr., proposals for			
making development program			
more effective in Jefferson			
County, Ill.	11824		
Writers, see Authors.			
Writer's experience (lectures)	20455		
Writing, author's guide for technical			
reporting	19160		
Writings of American authors, USAFI			
study guide	21248		
Writings on American history, 1956:			
departmental edition	11815		
document edition	12017		
Wrought metals, see names of metals.			
WS series	3539		
WTC, see Western Training Center.			
Wu, Chang In, relief	2182, 13854		
Wulfsberg, Karl N., apparent sky			
temperature at millimeter-			
wave frequencies	19171		
Wyatt, Walter, United States reports,			
cases adjudged in Supreme			
Court	1625		
Wyman, Thomas G., address, Feb. 24,			
1964	17157		

X-15, see Airplanes.	
X-ray apparatus:	
dental, physical survey manual	20767
diagnostic and therapeutic, prob-	
lems during use, USSR	
studies	9204
film developing equipment, waste of	
funds from procurement by	
VA, GAO report	6791
X-ray technicians, medical, employ-	
ment outlook	9396
X-rays:	
atlas of current roentgenographic	
findings in New Jersey radium	
cases	19236
civil defense emergency hospital,	
section	7695
diagnostic, and shoe-fitting ma-	
chines, health hazards	18901
diffraction—	
analysis of stresses appearing	
during machining of metals,	
USSR study	2674
phases in binary systems	
CaO-Al <sub>2</sub> O <sub>3</sub> , CaO-SiO <sub>2</sub> , and	
Na <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub>	11334
powder pattern	16739
research, USSR studies	7286
effect, roetgen irradiation of sus-	
ceptibility of white mice to	
ornithosis virus, upon infec-	
tion with aerosol of virus,	
USSR study	12653

# JANUARY-DECEMBER

Entry

0625

6082

17077

3329

19701

18681

6800

12482

9507

16573

12481

1427

8108

18913

12440

17853

15536

3578

18950

15090

4146

13460

2420

19041

20767

9204

6791

9396

19236

7695

18901

2674

11334

16739

7286

12653

## X-rays—Continued

fractional irradiation effect on activity of hexokinase and aldolase of brain and muscle tissue of rats, USSR study

Entry

16308

injuries, USSR study

10805

irradiation—

hydrazine and 1,1-dimethyl-

18778

influence on microsomal oxidase

and reductase activity in

livers of young male rats

13651

medical, protection up to three million volts, insert

13268

non-medical sources, safety standard

7574

population exposure, field trial of system to obtain data

11555

quantitative interpretation of mineralogical composition of

18127

Pierre shale

radioisotope source to develop Ray-

leigh scattering method for

analysis of high Z atoms in

low Z media

19254

scattered by weakly absorbing

polytype-crystalline materials,

absorption corrections for

intensity

13131

spectrographic analysis for trace

quantities of tantalum in

columbium

16634

X-ray topography of ruby crystals

9682

see also Mammography

Xanthophylls, participation in oxygen

transfer during photosynthesis,

USSR study

12861

## Y

Yaeger, Earl C., lighter door to ease

strain for potato warehouse-

men

7886

Yaffee, Phillip, integrated system for

collecting and analyzing en-

vironmental test data

14863

Yakima County, Wash., truck crop

production practices, labor,

power, and materials, by opera-

tion

17903

Yakima project:

Kennewick division extension, con-

struction, etc.

17452

bearing

12270

report

14050

Yakima Reservation:

land, purchase, exchange, etc.,

amend act—

17399

law

8320, 15720

reports

Yakima River, hydraulic and ge-

ologic factors, effects on stream-

flow of basin

4807

Yamamoto, Teruo, soil moisture con-

stants and physical properties

of selected soils in Hawaii

2389

Yamaoka, Hideki, method for calcula-

tion of laminar and turbulent

boundary layer around 2-

dimensional and axisymmetric

bodies with suction or blow-

ing

21910

Yancey, Marion H., Jr.:

C-135B category 2 performance

tests

13613-614

C-135B limited category 2 stability

and control tests

13616

Yang, Jae H., relief

436, 1869

Yannoni, N. F., molecular structure

of 2-(4'-amino-5'-azamethenyl

pyrimidyl)-3 pentene-4-01

19174

Yard service performance of class 1

railroads in U.S.

4170

Yards and Docks Bureau:

design manuals

3196-3204, 20889-893

Entry

Yards and Docks Bureau—Continued

engineered performance standards,

OTS bibliography

11658

publications, index

3205, 5777, 19042

Yarn:

production, 1963, current industrial

reports

13761

quality, effects of gin drying and

cleaning of cotton on fiber

length distribution

13589

spun, for sale, current industrial re-

ports

3390

1962 summary

1818

Yarrow, Marian R., maternal employ-

ment and child rearing, per-

sonal and family factors

8144

YAT-25E, see Airplanes

YAT-37D systems evaluation

13619

Yates, E. Carson, Jr.:

comparisons of some wing flutter

characteristics obtained by

modified strip analysis, etc.

differential-pressure system for

evaluating angles of attack and

slidslip of Ranger IV

1457

predicting flutter, etc., of unswept

wings

3024

Yates, Robert L., and others, relief

21173

Yavapai County, Ariz., geology and

ground-water resources of Mc-

Mullen Valley

4811

Yaw:

sensor, satellite, use of 2-degrees-

of-freedom gyroscope

spinning symmetric missile gov-

erned by arbitrarily nonlinear

restoring moment

9575

supersonic flows of perfect gas over

bodies of revolution at small

angles

16702

Yazoo-Mississippi Delta:

cotton, fiber and spinning prop-

erties, as affected by certain

harvesting and ginning prac-

tices, 1959-60

13587

power requirements for cotton gins

7892

Yazoo National Wildlife Refuge, gen-

eral information

700

Yearbooks:

minerals, 1962—

area reports—

departmental edition

1430

document edition

288

fuels—

departmental edition

1429

document edition

287

metals and minerals except

fuels—

departmental edition

1428

document edition

286

North Korean central yearbook,

1963, information from

18489

North Korean, 1962

885

Yearly variations in runoff for con-

terminous United States, 1931-

60

2433

Years of reform, prelude to progress

21101

Yeast, cells irradiated under aer-

obic and anaerobic conditions,

postradiation restoration,

USSR study

9218

Yee, G., electronic computer program

for analysis and design of

welded steel girders

13426

Yellow birch, see Birch

Yellow Cat area, Utah, geochemistry

of rocks and related soils and

vegetation

21351

Yellow poplar, see Tuliptree

Yellowstone National Park, petrified

forests

18832

Yeloushan, Charles C.:

mineral industry of—

New Jersey

1420, 21702

Pennsylvania

2988



# INDEX 1964

	Entry		Entry
Yemen:		Young, Loyd L., developed and potential water power of U.S. and other countries of world, 1955-62	18123
economic development	20140	Young, Robert J., restraint apparatus for thoracic roentgenographic examination of unanesthetized primates	1749
revolution, 1962, USSR study	18420	Young, V. D., spray-distribution patterns from low level applications with high-wing monoplane	16933
Soviet physicians work	20407	Young Men's Christian Association: building constructed on Fort Jay Military Reservation, acquire, authorization—	17430
tribes, bibliography	9785	law	17324
Yemeni Arab Republic, <i>see</i> Yemen		reports	17828
Yen, Ching Hsing, and wife, <i>see</i> Ching Hsing Yen, and wife.		Young people, <i>see</i> Youth.	
Yen, Yin-Chao:		Young Soon Kim, relief	15436, 17227, 17683
flow of air into partially-cased snow trench	19650	Youngstown, Ohio, principal electric facilities, map	674
isothermal flow of air through snow of variable permeability	19649A	Youngstown Welding & Engineering Co., torpedo tubes, defective, unnecessary costs incurred in procuring by Navy Dept., GAO report	19765
laminar heat transfer over melting plate, modified Leveque problem	10485	Your best defense	16848
Yenisey River:		Your Federal income tax for individuals, 1964	2453
diphyllobothriasis distribution in lower reaches, USSR study	9180	correction notice	6841
role of lake fishes in infestation of humans with <i>Diphyllobothrium latum</i> , USSR study	9180	Your future and Neighborhood Youth Corps	21664
Yeomen:		Your job and psychiatric patient	11676
communications, class A, trainees guide	18849	Your money and your life, FDA catalog of fakes and swindles in health field	19743
3 & 2, Navy training course	21824	Your personal affairs, keep with your important papers	2257
Yevdjervich, Vujica M., bibliography and discussion of flood-routing methods, unsteady flow in channels	18140	Your State Department	9778
YHU-1D, <i>see</i> Helicopters.		Youth:	
Yield tables, <i>see</i> Volume and yield tables.		antisocial behavior of minor in United States, statistical aspects	13783
YIG, <i>see</i> Garnet.		Cincinnati, profile of youth power—commitment to youth, progress in guidance, etc., under national defense education act, 1958-63, report	10480
Yih-Ho Pao, and wife, <i>see</i> Pao, Yih-Ho, and wife.		disadvantaged, national defense institutes for teachers, manual	17913
Yin-Chao Yen, <i>see</i> Yen, Yin-Chao.		education in armed forces of Rumania	21267
YMCA, <i>see</i> Young Men's Christian Association.		employment—	21521
Yoakum County, Tex., soil survey report	9777	act, education challenge (address)	1363
Yoga, USSR study	18388	certificates	18612
Yoo Sei Chun, <i>see</i> Chun, Yoo Sei.		problems and programs (address)	1360
Yorba Linda quadrangle, Calif., stratigraphy, structure, and oil resources, study	10641	exceptional—	
York, Pa., occupational wage survey	13062	education	4646
Yosemite National Park, general information	9661-62	publications list	590
Yoshikawa, Kenneth K., aerodynamic and rocket braking of blunt nonlifting vehicles entering earth's atmosphere at very high speeds	11392	fair labor standards act, message to young workers	15147
You and your passport	20811	farm, economic factors influencing educational attainments and aspirations	10453
You can prevent foodborne illness	7712	errata	12307
Young, A. Thomas, rotating-solid-rocket control system	16689	from school to work, Federal services to help communities	5846
Young, Albert G., testimony, hearings	4594	handicapped, organization and implementation of programs for, 1964	17920
Young, Earle W., helium mass spectrometer leak detector	14834	hazardous occupations, prohibitions for 16- and 17-year-old persons, comparison of State and Federal orders	7367
Young, George R., magnetometer to determine angular motion of spinning body in regular precession	11411	high-school-age boys, normative distributions of Air Force ABE aptitude indexes	19162
Young, Ida, NASA publications manual	20541	ideas, 4-H and youth development (newsletter)	6630
Young, J. A., diaphragms for sulfate cycle electrolytic cell	5615	improving teenage nutrition	5845
Young, John W., terminal control techniques for guidance during direct and skip entries for capsule-type vehicle	7503		
Young, Lawrence R., adaptive dynamic response characteristics of human operator in simple manual control	11395		
Young, Lou S., store pitch flexibility effect on flutter characteristics of wing-store configuration	20665		

Entry	Entry	Entry
	<b>Youth—Continued</b>	<b>Yugoslavia—Continued</b>
18123	interpreting their problems and needs through friendship (address)-----	ocean transportation, claims for recovery of excessive costs financed by Commodity Credit Corporation, Agriculture Dept., GAO report-----
1749	Italian Communist, and international Communist conflict-----	visas, abolition of fees, agreement-----
16933	Job Corps, establish— compilation of materials relevant to bill-----	Yugoslav sailor's 8 years in Chinese prison-----
17430	print as Senate document report-----	Yukon River basin: flood control, engineers report— departmental edition-----
17825	hearings-----	document edition-----
15436, 17683	law-----	Yuma County, Ariz., geology and ground-water resources of Mc-Mullen Valley-----
674	message from the President-----	Yuma County, Colo., geology and ground-water resources-----
19765	reports-----	
16848	manpower policies (address)-----	<b>Z</b>
2453	needs, U.S. experience in planning and providing for-----	Zahn, Charles, optical activity in oils derived from coals-----
6841	occupational training— explanation of manpower development, etc., act amdt.-----	Zahn, John J.: classical buckling of cylinders of sandwich construction in axial compression-orthotropic cores, edgewise compressive buckling of flat sandwich panels, etc.-----
21664	hearings-----	Zantop Air Transport, Inc., accident-----
11676	law-----	Zanzibar: African question mark-----
19743	reports-----	gazetteer, official standard names-----
2257	problems, fact book-----	Zaporozhstal' Plant, history and achievement, 13th anniversary-----
9778	program, Senate, continue, report-----	Zapp, Hans R., ferrimagnetic resonance relations for magnetocrystalline anisotropy in cubic crystals-----
13783	psychiatric clinic, adolescent outpatients, statistical report, 1962-----	Zashchita ot radioaktivnykh osadkov (periodical): translations-----
10480	school age, employment-----	Zee-Ching Woo, see Woo Zee-Ching.
17913	smoking, health, and you, facts for teenagers-----	Zeff, J. D., internal environmental simulator for man-machine system-----
21267	special education, statistics 1957-58-----	Zegers, Richard T., perception of distortion, distance and perspective in Ames trapezoid illusion-----
21521	when teenagers take care of children, guide for babysitters-----	Zehr, Michelle S., relief-----
1363	younger generation, recent developments in Soviet bloc, hearings-----	Zeleny, Lawrence, stability of wheat sedimentation values-----
18612	your teenage children and smoking-----	Zeller, John H., breeds of swine-----
1360	Youth and Children, Interdepartmental Committee on, see Interdepartmental Committee on Children and Youth.	Zen, E-an, Taconic stratigraphic names, definitions and synonyms-----
4646	Youth Corps, see Neighborhood Youth Corps.	Zener, Margot W., foreign trade regulations of Fed. Rep. of Germany-----
590	<b>Vttrium:</b> effects on electrorefined vanadium, separation of lanthanide series using phosphonic and iminodiacetic acid resins-----	Zeolites, synthetic, use for adsorption and recovery of sulphur dioxide from industrial gases-----
15147	solvent extraction recovery from siliceous Colorado ores-----	Zero gravity, instability effect on 2-phase heat transfer for sub-cooled water-----
10453	<b>Vttrium iron garnet, see Garnet.</b>	Zhukovskiy, Russian SFPSR, early infant mortality-----
12307	<b>Yugoslavia:</b> agricultural commodities, agreements-----	Zhurnal obshchey biologii (periodical): translations-----
5846	disability compensation as special form of protection under disability insurance, law-----	Zietz, Isidore, magnetic anomaly of possible economic significance in southeastern Minnesota-----
17920	economy, basic data-----	Zimmer, Paul D.: annual fish passage report, Rock Island Dam, Columbia River, Wash., 1962-----
7367	execution of criminal penalties, law-----	spring Chinook salmon transplantation study, 1955-61-----
19162	Federal Republic, and regional government officials, directory-----	Zimmerman, Everett A., geology and water resources of Bluewater Springs area, Carbon County, Mont-----
6630	1st Congress for industrial medicine-----	
5845	imports of machinery, 1957-61-----	
	Index-digest of decisions, 1949-62-----	
	labor law and practice-----	
	law on decorations, changes and supplements to law-----	
	law on narcotic drugs-----	
	legal journals, abstracts-----	
	5037, 7046, 7127, 7319, 10843, 11145, 12914, 18228, 19833, 19911, 20116, 20134, 20145, 20150-----	
	maritime trade and 7-year plan, 1964-70-----	
	most-favored-nation treatment, U.S. interest in-----	
	National Bank, statistical bulletin, glossary-----	
	10086	
	2308	
	15610	
	15684	
	14152	
	17311	
	8246	
	14120, 15482, 15523	
	20425	
	7856	
	7354	
	397	
	1943	
	2048, 4527	
	19606	
	10396	
	18287	
	18642	
	19312	
	2268	
	17118	
	8381	
	17119	
	15243	
	4983	
	5586	
	21828	
	17197	
	7	
	9938	
	8759	
	14379	
	1489	
	21771	
	21552	
	21596	
	8762	
	21319	
	2341	
	15969	

# INDEX 1964

	Entry		Entry
Zimmerman, Howard M., market factors in Lebanon	10897	Zirconium:	
Zinc:		alloys—	
content in human pancreas, USSR study	18354	separation, etc., of rare earth metals	11336
content in some soils in European part of USSR	18343	structure and properties	10967
content of human blood, growth-related changes, USSR study	16042	USAEC symposium proceedings 1962	5961, 10028
deposits near western margin of Coast Range batholith	18101	effect of impurity levels in zircaloy 2 microstructure, mechanical properties, and corrosion rates	20510
disposal from national stockpile—		intermetallic compounds in magnesium-rich alloys	18682
hearing	13988	minerals yearbook chapter	16648
law	15391	niobium-tungsten-zirconium and niobium-molybdenum-zirconium ternary systems, USSR investigation	4907
reports	13947, 14096, 19491	stainless-steel-lined zircaloy-2, fabrication of full rods, design	13695
geology of upper Mississippi Valley zinc-lead district (series)	797, 18102-103	Zirconium carbide, heat and formation	18700
industries, USSR activities	2656	Zirconium oxide, thermal shock resistance of zirconia with metal additions	20594
industry, mineral industry surveys, monthly	4171	Zone refining, investigating conditions for obtaining high-purity aluminum by zone recrystallization, USSR study	11079
lead-zinc deposits in Municipio de Januaria, Minas Gerais, Brazil	6796	Zoobenthos and nutrition of benthophagous fish in Lake Dalaynor, Chinese People's Republic	5001
lead-zinc domestic mining industries, stabilize—		Zoological Park, National, see National Zoological Park	
hearings	536	Zoologicheskii zhurnal (periodical): translations	16106, 19901
report	2195	Zoologists, Siberian, 2d meeting	2620
loading and transportation, Eagle-Picher Co. mines	5477	Zoology:	
mine production, mineral industry survey, monthly	4172	marine studies, USSR	8498
minerals yearbook chapter	21722	medical and veterinary, index catalogue	7898, 19057
ores and concentrates, marketing in U.S.	13105	USSR studies	5016, 9032, 18480
oxidized deposits of U.S., Colorado recovery by filtration from dross and scrap	21349	USSR translations from zoological journal	16106, 19901
report on 7th session of international study group	11323	Zoonoses, diseases transmitted from animal to man, little known varieties, USSR study	19873
scrap, mineral industry surveys, monthly	10319	Zooparasitology:	
slab, industry review of 1963, outlook for 1964	4174	USSR abstracts	2873-75, 4938, 4999, 5098, 9335, 9337, 12803-804
surface topography of zinc-blende structures	8100	USSR literature survey, 1959-63	9252
Zinc oxide:	11404	Zooplankton:	
mineral industry surveys, monthly-phase diagram for system vanadium pentoxide-zinc oxide	4173	biological studies, USSR	16409
Zinc sulfide, heats and free energies of formation	5605	effect on fish supplies, USSR study	16493
Zion, Elders of, see Jews.	16644	Zostera marina, see Eelgrass.	
ZIP code:		Zubleta, Zenon, relief	6432
general information on progress (remarks)	5632	Zucrow, M. J., propulsion and propellants	95
information, publications for sale by Superintendent of Documents, price list	18890	Zumbro River, Minn.:	
numbers, post offices directory, 1964	20727	flood control, engineer report—departmental edition	8523
see also Post offices.		document edition	8248
Zipf, E. C., Jr., observation of (0,0) negative band of N <sub>2</sub> in day-glow	9600	Zuromsky, G., irradiation testing of ceramic fuels	8051
Zircaloy, see Zirconium.		Zuzik, Michael B., labor law and practice in Philippines	1374
Zirconia, see Zirconium oxide.		Zymosan, treatment, effect on Coxsackie B virus infection	7983

Entry

th 11336  
 10967  
 10028  
 20510  
 18682  
 18648  
 4907  
 13695  
 18700  
 20594  
 11079  
 5001  
 19901  
 2620  
 8498  
 19057  
 18480  
 19901  
 19873  
 2873-75,  
 35, 9337,  
 9252  
 16409  
 16493  
 6432  
 95  
 8523  
 8248  
 8051  
 1374  
 7983

# MONTHLY CATALOG



OF UNITED STATES  
GOVERNMENT PUBLICATIONS

**JANUARY-DECEMBER 1964**

**Nos. 828-839**

**Entries 1-21929**

**Including Annual Cumulative Index**

**Issued by the SUPERINTENDENT OF DOCUMENTS**

U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C., 20402 : 1964